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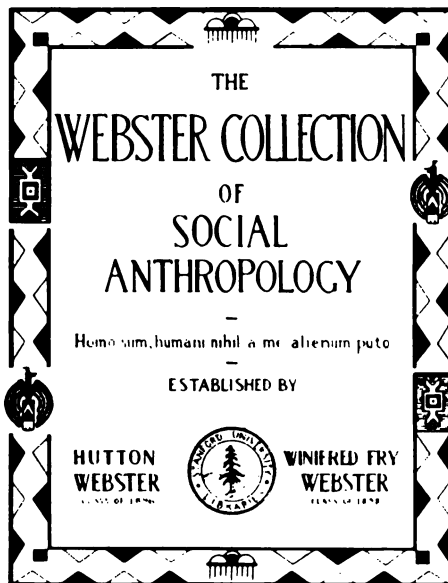
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THE ANTIQUARY'S BOOKS

GENERAL EDITOR: J. CHARLES COX, LL.D., F.S.A.

ARCHÆOLOGY AND FALSE ANTIQUITIES



SPECIMENS OF FLINT JACK'S FORGERIES IN THE ROYAL SCOTTISH
MUSEUM, EDINBURGH

THE IRON ROD ON THE LEFT IS THE TOOL HE GENERALLY USED FOR CHIPPING FLINTS

ARCHAEOLOGY AND FALSE ANTIQUITIES

ROBERT MCGILL
F.R.S.E. F.R.S. F.R.I.B. F.R.I.C. F.R.I.A. F.R.I.S.

WITH ILLUSTRATIONS BY THE AUTHOR

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ARCHÆOLOGY AND FALSE ANTIQUITIES

BY

ROBERT MUNRO

M.A., M.D., LL.D., F.R.S.E., F.S.A. SCOT.

WITH NUMEROUS ILLUSTRATIONS

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PLATE XI



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PREFACE

THIS volume owes its primary inception to the difference of opinion that has arisen with regard to certain archaic-like objects described as having been found on three prehistoric sites on the shores of the Clyde—some archæologists accepting, and others rejecting, their claims to be regarded as relics of the people who formerly inhabited these sites. And here the matter seems to have come to a standstill. Notwithstanding the teaching and practical investigations of so many British Archæological Societies, it would appear that antiquarian lore, even in the hands of experts, is inadequate to distinguish between true and false antiquities; and that relics of past civilisations have no evidential characteristics sufficiently marked to prevent them from being confounded with modern fabrications. No wonder that, in these circumstances, the very existence of such a thing as scientific archæology has been questioned.

To help to solve the difficulties thus raised, without resorting to the *tu quoque* style of controversy, it was necessary to wander somewhat far afield, so as to prepare the minds of general readers for the melancholy fact that

there is a back wash, almost abreast with the progressive tide of human culture, in which the bacterial germs of imposture find a *habitat*, independently of all nationalities. During these wanderings one paramount object has been kept steadily in view, viz. to emphasise the real archaeological arguments involved in the various disputes, so as to enlist the intelligent reader's own judgment on the problems at issue.

Such a work could not have been undertaken, with reasonable prospects of success, without utilising to a considerable extent the labours of other workers in the same field. On this point I have adhered to my usual practice of quoting, as far as practicable, the actual words of authors whose opinions are controverted, or approved, instead of compiling the substance of their views. All materials thus incorporated, either in the form of extract or illustration, are duly acknowledged—the former in the text, and the latter in the detailed list of illustrations. In addition to obligations on this score, I have to express special thanks to the following gentlemen: Mr. W. A. Donnelly and Mr. John Bruce, F.S.A. SCOT., for having afforded me an opportunity of carefully inspecting the structural remains at Dumbuck and Langbank while the excavations were in progress; the Council of the Society of Antiquaries of Scotland, for the use of the blocks of figures 35 and 55–9; and the Curator of the Royal Scottish Museum, Edinburgh, for the photograph from which Plate XI. has been made.

In conclusion, it may be noted that by the publication

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of full descriptive details of the two submarine structures (Dumbuck and Langbank), and of their undisputed relics, I am enabled to give due prominence to their archæological importance, as remains of what is virtually a new type among the early inhabited sites in Scotland.

R. M.

ARCHÆOLOGY AND FALSE ANTIQUITIES

CHAPTER I

PROLEGOMENA

TO delineate the various phases of culture and civilisation through which mankind have successively passed during their long career on the globe, prior to historic times, is the main object of scientific archæology. The materials on which such an inquiry is founded consist of a number of objects showing evidence of human workmanship, either incidentally picked up along the haunts and byways of our primeval ancestors, or purposely searched for among the débris of their inhabited sites and sepulchres. For the correct interpretation of such remains archæologists not only make use of the ordinary synthetical and analytic methods of research, but also cull from collateral sources whatever ascertained truths may be serviceable to their cause. Indeed, so wide and diversified is the field to which the archæological vision must extend that the investigator is constantly obliged to appeal to outside experts to assist in clearing up doubtful points. Before the investigator steps beyond the very threshold of this science he has to master a certain amount of linguistic attainments, which take up

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no inconsiderable amount of time and energy ; for to deal with the archæological phenomena of Western Europe alone, with any prospect of success, it is essential to be equipped with a knowledge of at least half a dozen foreign languages. To attempt, therefore, to convey to general readers a synopsis of the principles which underlie the technical qualifications necessary in dealing scientifically with a varied assortment of relics, collected from the dust-bins of peoples widely separated from each other in space and time, and too frequently influenced by fashions, traditions, and beliefs founded on ignorance and superstition, would be as great a *tour-de-force* as if a judge, before giving his decision in a legal case, were called upon to explain the fundamental principles of our national code of laws. On the other hand, to ignore altogether the rationale of the methods by which archæology is now studied, and to leave unmentioned certain conspicuous landmarks already established along the route, would be to deprive many of my readers of the means of intelligently following the discussions which form so large a portion of this volume. As a compromise in this dilemma I am placing before them, under the title of Prolegomena, a few selected sketches, which it is hoped may serve the double purpose of disclosing some of the legitimate methods and arguments by which archæological deductions are established, and of supplying valid reasons for suspecting certain objects to be false or forged because of their disharmony in the evolutionary sequence which characterises the works of man in all ages.

In these sketches the primary and fundamental elements of civilisation, such as man's unique place in nature, the special means by which he holds his own in the struggle of life, his ever-advancing capacity for utilising the forces of nature, the progressiveness of his mechanical inventions, etc., are more particularly dealt with. After perusal

of the prolegomena readers will, perhaps, come to realise the force of the argument that it would be as unnecessary to disprove a statement, or an inference, which is shown to be inconsistent with well-established archæological generalisations, as it would be to refute one which involved a contradiction of the law of gravitation. At this time of day the announcement of a discovery, which implied the contemporaneousness of relics of the Iron Age with those of the Palæolithic period, would be as startling to an archæologist as a report of the discovery of a fossil mammal in the Silurian period would be to a geologist—statements which, if accepted as true, would be subversive of many of the doctrines hitherto taught under the *ægis* of the sciences of archæology and geology.

1. THE SPECIALITY OF MAN'S WORKS

Man is differentiated from all other animals by the fact that the means by which he has acquired his present commanding position among them are, to a large extent, due to his superior intelligence and reasoning faculties. Neither in attack or defence, nor in the capture of his prey, nor in the execution of such mechanical processes as cutting, scraping, boring, etc., does he exclusively depend on the organs with which nature originally endowed him. In lieu of the specially developed teeth, claws, horns, hoofs, etc., used more or less for these purposes by other animals, man has provided himself with a relay of ingeniously constructed implements, weapons, and tools, through the instrumentality of which his life-functions are more efficiently performed. In fact, in this sense, *Homo sapiens* may be regarded as having rebelled against the stern decrees of Cosmic evolution; for, from the very beginning of his career, he successfully claimed a share in the administration of the laws of the material world, more especially in so far as they affected

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his own well-being. The actual starting-point of this new departure was the attainment of the erect attitude, which, by finally effecting a delimitation of the original function of the fore-limbs to purely manipulative processes, enabled him henceforth to pilot his way through the world by manufacturing various tools and implements, by way of supplementing his natural means of offence and defence. Bipedal locomotion, which from that time became man's normal mode of progression, was of itself of little consequence, being a mere morphological adjustment of certain parts of the body, displaying, indeed, less mechanical ingenuity than many other well-known animal transformations, as, for example, the adaptability of the fore-limbs of the Pterodactyle to both prehensile and flying purposes. The really important element thus introduced into the organic world was the use to which the eliminated fore-limbs were put in the manufacture of all manner of mechanical contrivances. The efficient working of these novel contrivances—implements, weapons, and tools—entailed, of course, constant watchfulness, and this again gradually led to greater expertness in manipulative skill. In this way new stimulants for the exercise of thought and of the reasoning faculties were constantly introduced on the stage of human life, the direct consequence of which was a higher development of the organ of intelligence, as well as a corresponding efficiency in mechanical appliances. From this vantage-ground man soon learned not only to distinguish the physical causes of a given effect, but to adjust the causes so as to produce that effect at his pleasure. The outcome of his long experience of the operations of nature is that now, to a large extent, he himself regulates natural phenomena, either by bringing together the physical causes which produce them, or by counteracting certain effects which are not desirable. Thus, in time of unusual drought, he waters

his fields, and in due season garners the produce. Notwithstanding his absolute inability to alter or annul any of the laws of nature, it is astonishing to contemplate the magnitude of the changes he has effected on the globe by his acquired power of skilfully adjusting means to special ends. Primeval forests and deserts have given place to cultivated fields; former hunting-grounds are stocked with a variety of domesticated animals; rivers are spanned and mountains tunnelled all over the globe; and even the great oceans have now become the safest of highways.

The crowd of new ideas, and the more complex train of reasoning which ensued from the thoughtful efforts of our earlier predecessors as toolmakers, soon led to the invention of spoken language—that of signs and gesture being no longer adequate to give expression to the increased cerebral work which had arisen. With the use of speech new outlets for social progress came into operation, and greatly stimulated their mental faculties. “Speech,” says Professor Cunningham,¹ “has been a dominant factor in determining the high development of the human brain. Speech and mental activity go hand in hand. The one has reacted on the other. The mental effort required for the coining of a new word has been immediately followed by an increased possibility of further intellectual achievement through the additional range given to the mental powers of the enlarged vocabulary. The two processes, mutually supporting each other, and leading to progress in the two directions, have unquestionably yielded the chief stimulus to brain development.” That articulate speech was acquired subsequently to the assumption of the erect attitude, and the specialisation of the hands and feet is, according to Haeckel, indicated

¹ Presidential Address in the Anthropological Section of the British Association, at Glasgow, 1901.

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“by the fact that children have to learn the language of their parents, and by the circumstance that comparative philology declares it impossible to reduce the chief human languages to anything like one common origin.”¹

As time progressed, and these talkative bipeds continued their predatory incursions into the arcana of nature, many other principles favourable to the improvement of their social economy were discovered and utilised. Thus a knowledge of the properties of fire, and the art of procuring it at will, furnished them with the means of increasing their food-supplies by cooking substances which otherwise would be unfit for human food. The rearing of domestic animals yielded a more reliable means of living than the precarious products of the chase, especially as the population increased and wild animals became scarce. The discovery of the art of cultivating plants and cereals opened up an almost unlimited source of human subsistence. Hence by degrees the more intelligent among them ceased their nomadic habits, and, instead of wandering about in search of the roots, nuts, and berries which nature provided, they began to sow seeds and plant roots; and so they gradually came to provide their own food-supplies. The introduction and dissemination of the knowledge of agriculture and pastoral farming among these primitive hunters and fruit-gatherers may be regarded as two of the most important and far-reaching events in the history of human civilisation. The vicissitudes of climate were successfully counteracted by the construction of houses and the invention of the art of weaving cloth from wool and fibrous materials, and hence their habitable area on the globe became greatly extended.

The personification of the invisible agencies of the material world into spirits of good or evil gave rise to

¹ *The Last Link*, p. 72.

the belief in a supernatural world. The idea, once mooted, that these spirits controlled external phenomena soon led to their being worshipped as gods, and hence arose religious principles which, under many guises and garbs, have ever since been potent factors in the development of human organisations.

To the faculty of speech was finally linked the art of writing, an invention which supplied the means of perpetuating their knowledge of the secrets of nature in a more precise manner than could be effected by oral tradition.

These are the main principles by which mankind have acquired their remarkable superiority over all other animals; and to the early founders of human civilisation may be traced the primary rootlets of the religion, theology, ethics, and altruism which find general acceptance among the civilised nations of the present day.

2. THE MATERIALS OF ARCHÆOLOGY

As the works of man's hands are the only evidential materials from which our knowledge of the past history of humanity is derived, it is essential, *in limine*, to have a clear notion of the special characters by which they can be distinguished from natural productions. This is not always an easy matter. Waterworn shells and pebbles, fantastic petrifications, perforated stones, stray fossils, and the many other odds and ends which may be picked up on an ordinary sea-beach, have often been mistaken for the works of man. On the other hand, successive generations have unconcernedly passed over a whole series of real stone and flint implements, and it was only within the last half-century, or so, that they were generally recognised to be objects fashioned by the hand of man. A flint may be chipped by a falling stone, the pressure and friction of shifting gravel, the action of fire or heat, etc., so that in many instances it requires the utmost ex-

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perience to distinguish the effects of natural causes from the works of man. The finding of ashes and charcoal in a circumscribed spot is generally accepted as evidence of man's presence at some time in the locality; but this inference, though practically correct, is not logically so, as fire may be caused by lightning. As a rule, evidence of design in the arrangement and disposition of inert materials suggests the hand and brain of man; but the dam of the beaver, the web of a spider, and the nests of some birds and insects are manifest exceptions to it. Decorative art of every description, from the simplest geometrical figure upwards, may be regarded as a monopoly of the human race; but the symmetrical disposition of patches of colour on the wing of a butterfly, the configuration of crystals, dendritic figures, and the forms of many of the lower animals, such as star-fishes, sea-urchins, etc., are sufficient to remind us that definitions are more easily formulated than logically defended. Practically, however, it may be accepted as a working proposition that no animal but man has ever manufactured an implement, weapon, ornament, utensil, image, idol, or any article of clothing. Nor does any other animal make use of fire to cook food, or of a stone to break a bone for its marrow, or of a line, symbol, or geometrical figure to represent thought. Hence objects found in excavating a prehistoric site, or under any conditions suggestive of a remote period, which can be assigned unequivocally to any of the above categories, are to be considered genuine relics—unless they are rejected for some exceptional reasons. The accidental falling of a worked object, such as a coin, from the surface to a lower level, or the fraudulent insertion of spurious objects into the trenches, may be cited as examples of what is meant by exceptional reasons.

Owing to various causes, archæological remains are

both scanty and fragmentary—for it is no part of nature's programme to preserve ancient relics for the purpose of instructing archæologists. Indeed, some of the most interesting and delicate objects of antiquity now extant owe their preservation to a combination of exceptional circumstances which have retarded the inevitable disintegration which, sooner or later, overtakes all organic compounds. The human body decomposes so quickly after death that, in a comparatively short time, nothing remains but a few bones to indicate the characteristics of the race to which the individual belonged. The habitations, strongholds, and other structural remains of the earlier races, even when formed of the most durable materials, are now either obliterated or buried under the accumulated dust of ages. As to the smaller relics—implements, weapons, ornaments, articles of clothing, etc.—which have escaped the ravages of time, they have to be sought for in tombs, caves, rockshelters, huts, etc. The scarcity of such materials is also greatly increased by the destruction of many objects owing to the carelessness or ignorance of the finders.

3. ARCHÆOLOGICAL DEDUCTIONS AND CHRONOLOGY

From the remarks already made it becomes manifest that to acquire accurate knowledge of the materials and methods of prehistoric archæology, even when the scope of an investigation is limited to a small portion of Europe, it is essential to serve a long apprenticeship in the study of minute details, more especially the resemblances and differences in the ornamentation and form of relics. When confronted with objects of doubtful authenticity the archæologist has to pass before the mind's eye, not only analogous objects found within the same archæological area, but those from more distant regions which have been at some former period ethnographically associated

with that area. Above all, he must make judicious use of the faculties of observation and comparison, so as to discriminate between the special characteristics of the suspected objects and those of the typical objects with which they are contrasted. And here the question naturally arises—How is a willing investigator to qualify himself, either to conduct archæological researches with the best possible results, or to interpret the materials already collected and preserved in a number of museums throughout the country? Unfortunately, with the exception of the Chair of Anthropology at Oxford, and two lectureships at Cambridge, there is no national provision within the British Isles for acquiring systematic instruction in the essential elements of British archæology.

Antiquarian societies occasionally publish valuable monographs on particular discoveries; but, in the main, their communications are confined to Roman antiquities, church architecture, the arts and industries of mediæval times, heraldry, genealogy, palæography, etc., none of which is of much value to students of the earlier history of man and civilisation. Few have the time or inclination to wade through the transactions of these societies to learn the rudiments of prehistoric archæology, even were they attainable by such means. The inevitable consequence is that the protohistoric civilisations of Greece, Egypt, and Babylonia, or the mediæval remains of Europe which, of course, contain the primary elements of modern culture, are far more attractive to amateurs and general readers. But these various departments of archæology, however interesting they may be, are not sufficiently representative of our national requirements. If British archæologists are to retain a position among the nations of the world, as pioneers of the science of anthropology, something more than desultory work is required. The accumulations of the past must be utilised

in systematic teaching, and fresh energy must start from the vantage-ground already gained. In contrast to our national poverty in this matter, it is interesting to know that the French capital contains a school (*L'École d'Anthropologie de Paris*) entirely devoted to the teaching of Anthropology. This institution has a staff of twelve professors, who deliver systematic courses of lectures in the various departments into which the science is apportioned among them. In America, also, anthropology occupies a worthy place among the educational subjects taught in their universities. According to Professor Haddon¹ there are at the present time some thirty-three universities and colleges which offer instruction in anthropology. "It is found to be an adjunct of sociology in nine, of philosophy in five, of psychology in three, of geology and zoology in five, and of medicine in one; while in five instances it is practically a faculty of itself."

In these circumstances one need not wonder that it is still pertinent, in this country at least, to ask if there be any recognised code of rules under the guidance of which trustworthy information, bearing on the early history of mankind, can be deduced from existing archæological materials. In advocating the affirmative side of this problem let me not be understood as holding that these rules are so clearly defined that he who runs may read. On the contrary, they are but faintly limned in the shadowy past, so that to decipher them requires as much technical skill as if they were obscure hieroglyphics. Nor is the necessary skill to be acquired by short cuts. Sherlock Holmes is represented as diagnosing a disease by a mere glance at his patient's boots; but, were he asked to explain the rationale of his apparently intuitive action, it would take him some time to arrange categorically the congeries of symptoms, experiences, and

¹ *Journal of Anthropological Institute*, vol. xxxii. p. 20.

reasoning processes, on which the diagnosis was actually founded. Even the trivial point which entitled him to discard the ordinary clinical routine was itself, in all probability, the result of years of study. It is precisely the same with the diagnostic utterances of the experienced archæologist. To formulate the principles on which his conclusions are founded would entail an analysis of the various steps by which his expert knowledge was acquired. Hence, in determining the chronological sequence and relative antiquity of relics, the investigator has to seek inspiration from a variety of sources scattered, maybe, over the whole field of archæology. The following notes are merely intended to give some general idea of the methods and kind of reasoning adopted in this arduous task.

The discovery, that implements made of bronze were vastly superior for cutting purposes to those previously in use, speedily effected a great improvement in the arts and industries of the people who took advantage of it. It is probable that copper and tin—the component elements of bronze—as well as gold, were discovered, and more or less utilised in some countries before the invention of bronze ; but their practical effects were not of sufficient importance, at least in Western Europe, to greatly influence the current course of civilisation. Originally emanating from one or other of the Old World civilisations bordering on the eastern shores of the Mediterranean, the use of bronze ultimately extended to all parts of Europe, though, of course, it took some centuries to reach the outlying regions. The precise date of the introduction of bronze into the British Isles is a matter of opinion ; but, according to Sir John Evans, we cannot greatly err by fixing this important event at 1200 to 1400 B.C. Iron became probably known as a metal in South

Britain some 400 years before the Christian era, but it was at least a century later before it superseded bronze in the manufacture of cutting implements. The chronological sequence established by the introduction and usage of these two metals has long been adopted as a rough-and-ready means of indicating the relative age of antiquarian relics. To say that an object belongs to the Stone, Bronze, or Iron Age, merely limits the range of that object to one of the three periods into which the past has been divided. The Stone Age, which, of course, precedes that of Bronze, extends backwards to the very commencement of humanity, or to the time when men first entered a particular locality: while the Iron Age occupies the time that has elapsed since bronze had to yield the palm of superiority for cutting purposes to iron. It must not, however, be forgotten that the Bronze Age varies, both as to its origin and duration, in different countries; so that the precise length of time represented by it in any given country, say Britain, may not correspond, either in length or contemporaneity, with that in Central Europe, Italy, Greece, or Egypt,—for in those days knowledge did not spread with the same rapidity that it does in modern times. For the same reason there may be a considerable difference in the time when social and industrial improvements began to take effect in different parts of the British Isles. For example, we have positive evidence of the existence of objects of the “Late Celtic” civilisation in the lake village of Glastonbury, prior to the Roman occupation of that portion of Britain; but in the north of Scotland such objects have only been found in conjunction with Roman remains or with those of a later period, thus showing an appreciable interval between the dates of the first known appearance of remains of “Late Celtic” civilisation in South and North Britain.¹

¹ *Prehistoric Scotland*, pp. 277, 400, and 403.

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These ages may also be still further subdivided into a number of intermediate epochs, the chronological sequence of which is strictly determined by the knowledge and experience of a few expert archæologists. Hence, in this way, the positive age of an object may be brought within comparatively narrow limits of the truth.

Another chronological scale, closely allied to that constituted by the introduction of metals into the arts and industries, arises out of the evolutionary changes which the various objects in use among the prehistoric peoples have undergone in the course of their long experience in the adaptation of means to ends. Of the numerous relics of the prehistoric period now preserved in the various museums of Europe and elsewhere, there are very few which have remained absolutely unchanged during the whole of that period. When critically examined they disclose a structural development, generally from a simple to a more complex form, presumably indicating higher efficiency. For example, the primitive stone wedge-shaped axe of the Neolithic period was, in the first instance, continued in copper or bronze, without much alteration in form. Its first real mechanical improvement was the addition of a raised ridge on each side which fixed the implement more firmly into its handle. Then appeared successively broad flanges, a stop ridge, a side ring, and finally the single upright socket. This latter was the result of a coalescence of the two partially formed side sockets when the flanges nearly met, and hence it became unnecessary to retain the dividing septum, as it was found that the portion of wood inserted into the socket was stronger and more durable when solid than when split. All these modifications had been introduced as successive improvements on the methods of fixing the implement to its handle. With the introduction of iron

the upright socket speedily gave place to the transverse socket of the present day.

Then, again, the simple bone pin was probably the prevailing type of the movable dress-fastener during the whole of the Stone Age, due probably to the fact that the substance (bone, horn, or wood), being non-elastic, did not lend itself to mechanical improvements. When, however, metal came into use, the straight pin speedily gave origin to the brooch, or fibula, constructed on the same principle as that of the modern safety-pin—a form which subsequently underwent a remarkable series of changes in the hands of Greeks, Romans, Etruscans, Celts, Scandinavians, etc. Some of these fibulæ have been regarded by archaeologists as indicating definite chronological epochs in the localities in which they were invented, or first appeared; as, for example, the Certosa fibula, which in Italy now definitely dates from the end of the 5th century, B.C. Between the primitive dug-out and a modern man-of-war there is, apparently, an impassable gulf; but yet the two are connected by an unbroken chain of successive improvements all registering greater efficiency in mechanical skill. Each of these intermediate increments constitutes a numbered milestone in the history and development of navigation. Similar relationships can be traced between the primitive hut and modern habitations. Indeed, the same reasoning applies more or less to all archaeological remains, for the whole trail of humanity may be described as literally strewn with the discarded implements, weapons, and tools, which, from time to time, had to give place to others of greater efficiency. Many of these superseded objects henceforth ceased to be manufactured, and consequently they also supply more or less precise chronological data. Thus the well-known jet or amber button, with a V-shaped per-

foration, so frequently met with in the late Stone and early Bronze Ages, for ever disappeared after the bronze button came into use. Hence these buttons have as precise a chronological value as if they were dated coins. But there are some other antiquarian objects, such as the bone pin and stone hammer, which have no such value, as they have been used and manufactured in all ages.

Some further indications of the relative chronology of antiquarian remains may be gathered from a careful study of their geographical distribution. Precise and accurate information on this point is the best evidence of archæological competence when dealing with objects of doubtful authenticity. Attention has already been directed to the fact that fresh discoveries of the laws of nature and of mechanical contrivances were progressive incidents in human civilisation. Whenever a better method for the conduct of the affairs of social life was invented, it was in the first instance adopted by the people of the district; but if the improvement was of striking importance it soon spread far and wide. Thus the habit of cooking food, the cultivation of grain, the domestication of animals, the construction of huts, the manufacture and hafting of tools, the art of projecting missiles, etc., may be said to be common to mankind from a very early period. As, however, the human family increased, and became divided into hostile communities, occupying more or less distant parts of the globe, many new inventions and mechanical improvements became necessarily more restricted, or took a longer time to reach distant races. The practical effect of this fact on modern archæology is, that many of the most valuable antiquarian objects are found only within certain areas of more or less extent, beyond which their analogues have assumed different types. This generalisa-

tion applies not only to the smaller objects such as are usually preserved in museums, but to structural remains, habitations, forts, sepulchres, etc. Indeed, so powerful are local influences in moulding the art productions of different races that, even in copying from the same foreign models, their works are sufficiently differentiated in style, workmanship, and character to be readily distinguished from each other. The Celts and Scandinavians have borrowed spirals and interlacements from a common source, and they have both utilised these primary elements to decorate certain brooches; but the effects are so different that it is impossible to mistake a Celtic for a Scandinavian brooch, or *vice versâ*. Similarly we find nurhags, brochs, tumuli, dolmens, beehive houses, bronze razors and saws, buttons with V-shaped perforations, certain fibulæ, and many other objects of stone, horn, and bone, too numerous to be mentioned, occupying special areas of distribution. Hence there are experts who, by merely glancing over a mixed collection of prehistoric objects selected from different parts of Europe, could assign almost every specimen to its proper archaeological area. Sir Arthur Mitchell's Jubilee Address at the Society of Antiquarians of Scotland (1902) furnishes remarkable evidence of how many special types of structural remains, as well as objects of art and ornament, are confined to a few small areas in Scotland. Were any person to announce the discovery of a broch, or a carved stone-ball, or a massive bronze armlet with Late Celtic ornamentation, or a flat polished stone-knife of the Shetland type, or an Orkney stone-club, outside certain well-defined districts within the Scottish archaeological area, Sir Arthur would at once prepare for a battle-royal on the evidence.

There are a few other points which sometimes help

in the solution of chronological problems relating to antiquities ; but it is unnecessary here to dilate on them, as their value depends on the particular circumstances of each case. Under this category the following fall to be classified :—

(1) The position of relics beneath stratified materials, growing peat, stalagmitic deposits, sand-dunes, etc., the date of which may be approximately estimated by calculating the time the superincumbent materials have taken to accumulate.

(2) The association of different objects in one place, as in a concealed hoard, is of value in determining the contemporaneousness of the objects thus brought together.

(3) The influence of the atmosphere on antiquarian objects, whatever the material they may be made of—flint, stone, amber, jet, or metals—is an important element in determining whether they are old or modern. Flint is liable to be altered by heat, light, humidity, and carbonic acid, and some kinds of flint are more affected than others. The result is sometimes very superficial, only a mere film, and at other times we have a measurable layer of porcelain-like patina over the whole surface of the object. The peculiar greenish patina on old bronzes is regarded by experts as a valuable indication of antiquity. But such proofs have to be carefully weighed, as most of them have been more or less successfully imitated by artificial processes.

As a summary of the substance of this section the following remarks, though used elsewhere in discussing the art of interpreting archæological remains, may be quoted with advantage :—

“ All past phenomena have been stereotyped in the book of Time, whether they have left in the material world any discernible

trail or not. Hence, chronologically and relatively, every single event bears to every other event an unalterable position, the determination of which is one of the main objects of archaeological science. But the problem is a difficult one,—and in many cases absolutely insoluble by human ingenuity. As the materials of archaeology lie, for the most part, outside the scope of written records, the ordinary methods of historical research are inapplicable, and consequently others have to be resorted to. In the present advanced state of the science of prehistoric archaeology it is hardly necessary to explain what these methods are. When an architect, well versed in the developmental stages of his art, comes upon a ruined church or some other building of note, he can generally tell after a slight inspection to what period and style it belongs. He forms his opinion on some of the characteristic details of the ruins—a piece of sculpturing, the shape of a window or moulding, or some other apparently insignificant feature. Art, like fashion, is a reflection of its ever-changing environments, and hence the products of every age have special peculiarities by which, within certain areas, they can be recognised. The art products of the old-world civilisations of Assyria and Egypt were as highly differentiated from each other as those of China and England are at the present time. The consecutive phases of this evolution in human civilisation have occasionally left traces behind them in the form of relics which may be compared to instantaneous photos of phenomena which can never be repeated. The recurrence of a combination of circumstances which would evolve a style of art that could be mistaken for that of ancient Egypt would be as improbable as the reappearance of the extinct Dodo among the world's fauna of the future. An animal, a plant, or a civilisation, it matters not which, once extinct, never again appears on the stage of current organic life. It is this great law of evolution which enables the archaeologist to prosecute his studies with confidence. He gathers the waifs and strays of past humanity from the dust-bin of ages, and by a comparison of their resemblances and differences determines approximately their distribution in space and time. Although these old things have no labels affixed to them they present special characteristics—certain marks or symbols, unconsciously

impressed on them by their original owners or manufacturers—which become legible in the hands of the initiated. So much is this the case that Scandinavian experts would have no difficulty in picking out from a mixed assortment of stone implements every one that was of Scandinavian origin. But the principles by which this brilliant result can be accomplished are the same as those practised by a dealer in old furniture when he excludes from his collection this or that article as a forgery.”¹

4. FALSE ANTIQUITIES

From the data already advanced it will be seen that the study of prehistoric archæology is by no means such plain sailing that any tyro who happens to stumble on relics of bygone ages, can all at once assume the rôle of an intelligent expounder of the culture and civilisation of their original owners, or of the age to which they belong. Such problems, even in the hands of the most experienced archæologists, are beset with bewildering difficulties, often of an inextricable character. Indeed, the path is strewn with pitfalls of various kinds, into which unwary antiquaries are apt to fall, without their *bona fides* as well-meaning investigators being in the least degree questioned. Secondary burials in tumuli, and the repeated occupancy of caves and other inhabited sites at long intervals, have often given rise to uncertainty and confusion, by bringing together relics of different ages and civilisations. Neolithic people have sometimes buried their dead among the *débris* of a Palæolithic settlement, with the result that modern excavators have not unfrequently regarded the osseous remains of the former as contemporary with the relics and fauna of the latter, such as was the case at Solutré.² But it is not necessary to enlarge on instances of this kind, which, as may be easily imagined, are by no means uncommon.

¹ *Rambles and Studies in Bosnia-Herzegovina and Dalmatia*, p. 328, 1900, 2nd ed.

² *Archæological Journal*, June, 1902, p. 116.

When to such sources of error are added those due to imperfect observations, hasty generalisations, prejudice, false judgment, etc., it is really a wonder how few mistakes have been recorded during the uphill journey since the science of archæology was founded.

Passing from the sins of omission and commission without *mala fides*, we come to the disagreeable problem of considering the falsification or forgery of antiquities, which, being the *pièce de résistance* of this volume, comes more appropriately at the end of the Prolegomena. To advocate plausible theories, even should they ultimately turn out to be erroneous, is rather to be commended than otherwise, so long as the critic adheres to legitimate methods of controversy, as this is often the best and most effectual means of eliciting the truth. It is not flattering to one's *amour propre* to be imposed upon by fraudulent objects in any circumstances; but in archæology the victims need have no qualms of conscience on this score, because they are generally in good company. It is a well-known fact that, at one time or other, some of our greatest antiquaries have been imposed upon by modern fabrications. Sir John Evans acknowledges that both he and the authorities of the British Museum were for a time taken in by a school of British forgers who manufactured spurious specimens of ancient British coins. Indeed, it is difficult to see how an active archæologist can altogether avoid such a fate, except by suspending his judgment whenever the least difficulty crops up. *Si non errasset, fecerat ille minus.*

Some thirty years ago I was proud of exhibiting to my friends a large scarabæus made out of some kind of soft stone which I brought back as a memento of a visit to the land of the Pharaohs. But alas! it turned out to be a forgery, and an instructive lesson which I have never forgotten. Not long ago, while travelling in the Island

of Rügen, I purchased a large nodule of amber, under the belief that it was a fine specimen of the kind found in the locality. When, however, I showed it to my friend Professor Conwentz, of Danzig, a well-known authority on this mineralised resin, he grasped it momentarily, and with a knowing look said, "Made in Germany."

Since the study of archæology began to be conducted on scientific methods, some half a century ago, antiquarian relics, especially those of the Stone Age—objects which previously were scarcely recognised as works of art—have acquired a large pecuniary value; and hence their enhanced value commercially is a standing temptation to unscrupulous persons to manufacture imitations of the genuine articles. But although the primary object of most forgers of antiquities is undoubtedly pure gain, experience has shown that this is not invariably the case. The late M. G. de Mortillet, who paid great attention to this phase of archæological error, classifies the motives to which falsifications may be assigned as follows:—

"The first, which takes the lead of all others, is the desire of gain; to sell objects, to sell collections, and to secure for them a money consideration in proportion to the completeness and rarity of the pretended discoveries.

"The second—self-conceit (*l'amour propre*): to discover and possess that which no other person has discovered or possesses, and above all to publish a sensational report.

"The third—a foolish national pride, which leads one to find in his own country everything that has been found elsewhere, and even something more.

"The fourth—philosophical and religious prejudices, which, fearing the light of truth, lead one to oppose certain studies by exposing them to ridicule.

"The fifth—jealousy (*la vendetta*) of some person whose reputation an opponent wishes to undermine.

"Lastly—what may be called the love of mystification (*l'amour de la fumisterie*), the mere pleasure of playing a mischievous joke."¹

¹ *L'Homme* (1885), p. 525.

Sir John Evans has published¹ a very interesting article on the forgery of antiquities, which ought to be read by all who desire to profit from the experience and instruction of one of the ablest exponents of British archæology which this country has produced. In this brochure the author gives some racy illustrations of forgeries at different times and in various countries in every department of archæology—manuscripts, inscriptions, gems, pottery, glass, enamels, ivories, coins, weapons, implements, and ornaments. As this article is readily accessible to the public, it is unnecessary to summarise its contents. A few of his preliminary and concluding remarks, being of a general character and apropos to the object of this essay, may, however, be quoted with advantage.

"The demand for antiquities at the present day, and, indeed, for many years past, having far outstripped the powers of legitimate supply, the high prices paid for portable relics of the past inevitably lead to their being fraudulently imitated. As with the ordinary 'smasher,' who finds that it takes less time and trouble to make and pass a bad shilling than to earn a good one by honest labour, so the forger of antiquities finds it easier to make and sell some counterfeit coin or bronze than to set to work to dig one up or to procure one from those who have done so. The professed forger of antiquities occupies, however, a far higher sphere than the mere producer of bad shillings, and, in addition to any profit that he may make by his skill, has the inward satisfaction of feeling that he has matched his ingenuity against the experience and discrimination of someone who thinks himself an antiquary, and has come off victorious. On the other hand, the knowledge that forgeries must and do exist tends to sharpen the eyesight of antiquaries, few, if any, of whom can honestly say that they have never been duped. As dogs must pass through their distemper, so an antiquary must have bought his forgeries before he can be regarded as thoroughly seasoned. Some, like myself, have not

¹ *Longman's Magazine*, December, 1893.

only purchased forgeries, but have published accounts of them as if they had been genuine antiquities—accounts which any amount of subsequent withdrawal fails to annihilate. . . .

“And what is the moral? Are collectors to confess to an absolute inability to protect themselves from fraud, and cease collecting in despair, or are there still grounds for hoping that collections immaculate from forgeries may be formed? The case, after all, is not so bad as it appears, for, great as may be the forger's skill, not one of his frauds in a thousand eventually escapes detection. By those long versed in any particular branch of archæology a kind of intuitive perception is gained which enables them almost at a glance to distinguish between the true and the false. While attaining to this happy stage, the fact of being occasionally taken in helps to sharpen the powers of observation, so that the existence of forgeries can hardly be regarded as an unmixed evil. The knowledge of their existence tends, moreover, to encourage a more minute and scholarly investigation of every detail in genuine objects of antiquity, and assists in creating that judicial frame of mind which avoids too sudden conclusions. In the advance of science it is hard to say which is the more mischievous—to believe too little or to believe too much; and the true moral of what we have been considering seems to be that which two thousand years ago was enunciated by Epicharmus—‘that the very nerves and sinews of knowledge consist in believing nothing rashly.’”

There is, however, another side to the problem of forgeries which ought not to be overlooked. Every fair-minded person must admit that to characterise a particular group of objects, ushered into the archæological arena under the auspices of honourable men, as forgeries, involves grave responsibilities, as, undoubtedly, such an action implies moral delinquency somewhere. But the possibilities of the real facts in such cases have generally so wide a range that no innocent person can feel annoyance on this score. On the other hand, any would-be critic making such a charge wantonly, or without sub-

stantial evidence to show that his suspicions are well-founded, would be guilty of most reprehensible conduct. Nor would a prudent person allow himself to be inveigled into a controversy of this kind without being in possession of the most cogent evidence in support of his position; because there is ample experience to show that, whatever the issue may be, the critic rarely emerges scatheless. Should his views turn out to be correct, it goes as a matter of course, as everybody is wise by that time; nor is it likely that his former opponents will appear on his triumphal car. While, should the charge be disproved, he has to bear no small punishment in the ridicule of his fellow-archæologists, on finding that he has become a dupe to his own self-confidence. It follows, therefore, that in disputes as to authenticity of antiquities there must be, at least, two parties holding opposite opinions, both of whom, however, may be actuated with the most honourable motives. No credit can be accorded to professed archæologists who sit on the fence, as their final decision is always on the winning side. But, on the other hand, no personal considerations should be allowed to interfere with a fair discussion of cases of suspected forgery, more especially in an age when the perversity and gullibility of human nature can be so easily utilised as a medium to give currency to false doctrines.¹

Before concluding this section it may be observed that this volume deals only with incidents of modern forgeries, though such practices are not confined to any age, especially since coinage became an important element in commercial transactions. Sir John Evans, in the valuable

¹ Perhaps readers may see in these remarks a veiled reference to the decided action taken by myself in the Clyde controversy. If so, they are right. My action was taken after mature deliberation for the sole purpose of safeguarding the interests of Scottish archæology. No other motive, personal or otherwise, had a moment's consideration in my mind, and the reasons of that action will be fully vindicated in the following pages.

article already referred to, makes the following remarks on this point :—

“ On the forgery of coins alone books might be—and indeed, have been—written. The subject can only be here treated in a somewhat superficial manner. Before dealing, however, with modern forgeries a few words must be said with regard to those coins which, though counterfeit, are as much real antiquities as the originals they imitated—with which, indeed, they were contemporary. It is not so much among the Greeks as among the Romans that the art of plating a core of copper with a thick coating of silver was practised for the production of false coins. To prevent the practice coins were struck with the edges all notched by filing, with the intention of showing that there was no copper inside. But even these *serrati*, which were in great favour with those shrewd barbarians, the ancient Germans, came to be forged, and our own ancient British moneyers at an early period learnt the art of striking coins of copper, plated with silver and gold. In early imperial times at Rome it would seem that curio-hunters had an affection for false coins, one of which, according to Pliny, was worth several good ones.”

A coin found on the Buston crannog, the only one discovered on the crannogs investigated in the south-west of Scotland, was, on the authority of the same numismatist, pronounced an early forgery of the sixth or seventh century, and probably of Saxon origin. It was composed of two thin plates of gold with an intermediate core of copper.¹

5. EXPLANATORY

It now remains to explain briefly how the principles and methods of archæology, as defined in the *Prolegomena*, are utilised in the following pages as a means of detecting spurious antiquities, and of instilling into the minds of readers a sufficiently wholesome scepticism to enable them to pilot their way along an unusually dangerous coast.

¹ *Ancient Scottish Lake-dwellings*, p. 231.

At the outset it was suggested that the title of this book should be *Forged Antiquities, and how to detect them*. But an objection to the second clause was raised on the ground that it would be impossible to give instruction which could be made applicable to all the cases which might subsequently arise. The present title—*Archæology and False Antiquities*—at once concentrates attention on the two contrasted ideas, and suggests that the former has a special bearing on the latter. To expound the nature and far-reaching effect of this relationship is the main object of this volume. The task, as thus defined, can be more effectually accomplished by giving a short account of some controverted problems with regard to the authenticity of antiquities, which have engaged the attention of many distinguished archæologists during the last thirty or forty years, than by introducing hypothetical data, such as Sir Walter Scott's amusing descriptions of the antiquarian diletterantism prevalent in his day. If truth be stranger than fiction, why should we go outside its boundaries for more piquant elements? In this way the critical archæologist becomes, in a great measure, independent of the conflicting statements volunteered by unskilled observers. Once a fraudulent element creeps into archæological explorations it is hopeless to attempt to reconcile the contradictory data which are sure to crop up. So far as the present work is concerned there is no occasion whatever to deviate a hair's breadth from the lines of strict reality; or to invoke the arts and embellishments of the accomplished *litterateur* to weave the materials into a tale of surpassing interest. Indeed, it would be hardly possible for Sherlock Holmes himself to concoct a story of consecutive events which would more forcibly portray the different grades and foibles of present-day antiquaries than that which has developed out of some recent investigations in our own country.

CHAPTER II

FORGED OR FALSE ANTIQUITIES IN VARIOUS PARTS OF THE EUROPEAN CONTINENT

THIS chapter is devoted to short descriptive notices of a series of remarkable forgeries, or supposed forgeries, on the Continent of Europe, some of which at the time caused great excitement in archæological circles, because the problems at issue had ultimately become entangled with international prejudices. First in importance is the famous Moulin-Quignon jaw, which, about the time the scientific world was startled by the publications of Darwin and Lyell on the antiquity and origin of man, gave rise to a singularly animated controversy between French and English savants. After noticing some bold but unsuccessful attempts to impose on French archæologists by a public exhibition of recently manufactured objects, in imitation of those remarkable relics, then for the first time being discovered in the Palæolithic caves of France, we pass into Switzerland, where for many years the great lacustrine discoveries of that country have afforded a prolific field for the forger's ingenuity. The controversy about the mysterious finds at Breonio, in North Italy, was carried on principally by the late M. G. de Mortillet and Professor Pigorini ; but, so far as I know, the dispute is still *sub judice*. Nor is such a termination by any means an uncommon result of these polemical contests, so great sometimes is the difficulty in coming to a decision on the problems involved. Hence

some people argue that archæological discussions, even among experts, are of little value. But this is short-sighted reasoning. The very fact of the authenticity of an object being publicly called in question disqualifies it from having any evidential value until the doubts entertained about it are either removed or confirmed.

THE MOULIN-QUIGNON JAW

Dr. Hugh Falconer, F.R.S., writing from Abbeville, on 1st November, 1858, expressed himself as follows with regard to M. Boucher de Perthes' discoveries of flint implements in the Palæolithic gravels of the Somme Valley:—

"After devoting the greater part of a day to his vast collection I am perfectly satisfied that there is a great deal of fair presumptive evidence in favour of many of his speculations regarding the remote antiquity of these industrial objects, and their association with animals now extinct."¹

On the 23rd of March, 1863, some four years after a few of the leading archæologists of France and England had come to recognise the truth of Dr. Falconer's opinion, a workman engaged in digging gravel near a windmill called Moulin-Quignon, in the suburbs of Abbeville, came to inform M. Boucher de Perthes that a small portion of a bone was to be seen projecting from the face of a cutting then in progress. He and a friend (M. Dimppe) went at once to the spot and witnessed the extraction of the bone, which proved to be a portion of a human lower-jaw (Fig. 1). It was embedded in a dark sandy feruginous seam, almost in contact with the underlying chalk, $4\frac{1}{2}$ metres from the surface and 30 metres above the level of the Somme. Associated with this bone were some flint implements of the usual types, which were then unsuspectingly accepted as genuine

¹ *Essays*, etc., by Grace, Lady Prestwich (1901), p. 83.

relics. The news of the discovery caused great excitement among leading anthropologists on both sides of the Channel, and many of them at once visited the locality.

Meanwhile doubts as to the authenticity of the jaw had been freely expressed by some of the English visitors, and hence a controversy arose, which soon reached such a climax that the disputants arranged to hold an international congress of representative men to inquire into the whole circumstances. Accordingly, this congress was opened in Paris on the 9th of May, 1863. France was represented by MM. Lartet, Delesse, De Quatrefages,

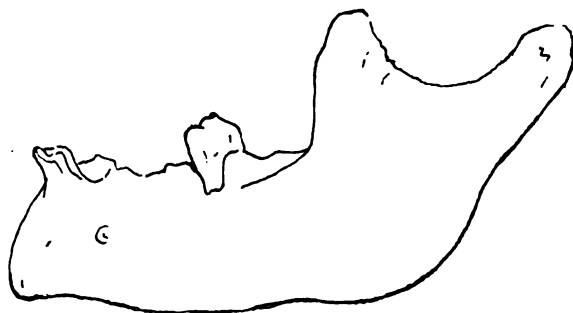


FIG. 1. OUTLINE OF HUMAN LOWER JAW OF MOULIN-QUIGNON (3)
After De Quatrefages

Bourgeois, Bateux, Gaudry, Desnoyers, and Milne-Edwards; England by MM. Falconer, Prestwich, Carpenter, and Busk (Evans had also been nominated, but was unable to attend). M. Milne-Edwards presided, and in the name of his French colleagues presented a report affirming the authenticity of the jaw; but after many meetings, much discussion, and a visit to Abbeville, the English representatives remained unconvinced, and so the congress dispersed, leaving the jaw as much as ever a bone of contention.

It will be unnecessary to describe in detail the various

phases of this celebrated controversy, as they may be readily consulted in the current scientific literature of the period.¹ For the present purpose a few categorical statements of the salient features of the arguments, *pro et con*, will suffice.

(1) Although many of the leading archæologists had, during the last three or four years, admitted the genuineness of flint implements found in the Somme gravels, there were still not a few who denied this, contending that if they were really relics of man some of his osseous remains ought also to be found along with them. This induced Boucher de Perthes to offer a reward of 200 francs to the first workman who would discover a human bone *in situ*. Eight days later, says G. de Mortillet, he was informed of the discovery at Moulin-Quignon.

(2) All visitors to the scene of the discovery of the human jaw were, of course, anxious to secure specimens of the famous flint implements *in situ*; and it seems that most of them, under the guidance of the workmen, were successful. But alas! nearly all of these implements turned out to be modern fabrications. In proof of this statement a passage from Sir Charles Lyell's *Antiquity of Man* may be cited:—

"Several eminent geologists from Paris and London visited the Moulin-Quignon pits in the April following, and saw many flint hatchets dug out in their presence from the black seam, by a body of sixteen workmen. These flint implements, as well as some forty others, said to have been extracted from the Abbeville drift in the course of the preceding month, were all, with one or two exceptions, fresh-looking, and entirely

¹ See the works of Boucher de Perthes (*Antiq. Cell. et Antedil.*) and of Lyell (*Antiquity of Man*), *Mémoires de la Soc. d'Anthropologie*, *Comptes Rendus Acad. des Sciences*, etc. Subsequently short notices of the subject in dispute were given by Hamy (*Précis de Paléont. Humaine*), G. de Mortillet (*Le Préhistorique*), De Quatrefages (*Hommes fossiles et Hommes sauvages*), and others. An interesting notice of it will also be found in the *Life of Sir Joseph Prestwich*, recently published.

devoid of the usual marks of antiquity, so characteristic of the genuine St. Acheul and Abbeville implements. . . .

" Subsequent observations by Mr. Evans, and others by Mr. Keeping, who was employed by Messrs. Evans, Prestwich, and others, to dig in the pits at Moulin-Quignon,¹ established beyond a doubt the important fact that some of the workmen were in the habit of forging and burying flint tools, having moreover attained no small skill in the art of fabricating them and passing them off as genuine, so that we are entitled to question the verdict of the numerous scientific observers who visited Abbeville in 1863, few of whom, if any, were prepared to treat with due suspicion and scepticism the testimony of the workpeople whom they employed. . . .

" If, then, so many of the flint implements are modern counterfeits, a doubt naturally arises as to the authenticity of the jaw-bone itself. May it not in like manner have been introduced by one of the fabricators of the spurious tools into the black seam, to satisfy the demand for human fossils for which a reward had been offered, to be doubled if a bone was shown *in situ*?"²

(3) But what caused the chief divergence of opinion among the scientists was the anatomical peculiarities of the jaw itself. It was freely admitted that these were so remarkable as to exclude the idea that it had been taken out of a modern grave, or belonged to an individual of the race now inhabiting that part of France. M. Pruner-Bey thought the skull to which it belonged was brachycephalic, analogous to some skulls found in a tumulus of the early Iron Age in Switzerland. Mr. Busk showed that it had a striking resemblance to that of a skeleton, supposed to be Celtic, found at Mesnières, some fifteen miles distant, and which was then preserved in the private collection of M. Boucher de Perthes, where he had seen it. It then transpired that the said skeleton had been found, the year before, by a labourer who was known to have frequent intercourse with one of the gravel-diggers at

¹ See *Athenæum*, July 4th, 1863, p. 19.

² Lyell's *Antiquity of Man*, p. 515, 3rd ed.

Abbeville. Hence the theory that the disputed jaw had originally been part of one of the skeletons found in the ancient graves at Mesnières, and had been fraudulently deposited in the gravel-cutting at Moulin-Quignon. There was, however, this noticeable difference between it and the bones from Mesnières, viz. that it was covered with a blackish substance, while the latter had the appearance of having been in contact with a reddish sandy material. But on sawing through a portion of the Moulin-Quignon bone it was found that its interior contained a similar reddish material, totally different from that on its external surface—a fact which, according to de Mortillet,¹ proved that before it became imbedded in the gravel it had previously been associated with a different matrix.

M. Hamy subsequently showed² that the same type of jaw was prevalent in the Neolithic period, and he instances examples found at Bellancourt, Epahy, in the peat of the Somme valley, and in dolmens at Quiberon, Chamant, and Argenteuil. The opinion of the experts, who maintained from its osseous characteristics that the jaw was really old, was thus met by the hypothesis that it was a relic of a Neolithic race, and not of the Palæolithic people who lived in the Somme valley when its quaternary gravels were deposited. From the fact that the jaw was well preserved, the coronoid process being still intact, it does not appear to have suffered from abrasion, such as would occur were it transported among river gravel. Hence M. de Mortillet concluded that it had been imported into the facing of the cutting in the gravel-pit at Moulin-Quignon by the hand of modern man.

From the outline of this jaw (Fig. 1), reproduced from an illustration by M. de Quatrefages, one of the most persistent advocates of its authenticity, it appears to me

¹ *Le Préhistorique*, p. 243.

² *Op. cit.*, p. 218.

that the great projection of the chin here shown is inconsistent with the idea that the man who owned it lived at the time the gravels of Abbeville were deposited, *i.e.* in Quaternary times. In the above respect it conforms more with the under jaws of Neolithic or modern races, than with those of the Quaternary period, so far as the few specimens hitherto known will admit of a comparison. The chin of the Spy jaw (Fig. 2) slopes away from the teeth downwards and backwards, giving a striking prognathic appearance to the teeth and alveolar border. The same sloping away of the chin is also well marked in the fragment of an under jaw known as the Naulette

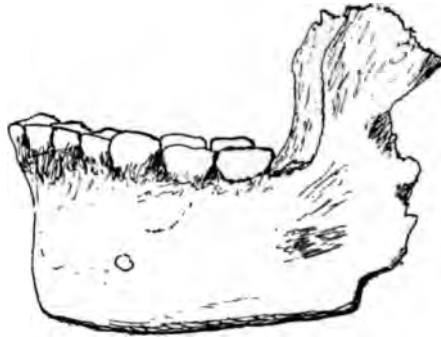


FIG. 2. LOWER JAW OF A SKELETON FOUND IN THE
GROTTE DE SPY, BELGIUM (§)
After Fraipont

jaw (Fig. 3), found in one of the Quaternary caves of Belgium, near Dinant, in the valley of the Lesse. According to Broca a non-retreating chin is a more recent characteristic, and consequently, the greater amount of backward slope indicates a nearer approach to the Simian type.¹ If this law of human development be accepted, then the deposition of the Moulin-Quignon jaw was evidently a fraud. This is the verdict which,

¹ See *Prehistoric Problems*, pp. 122 *et seq.*

after a long interval of reflection, finds general acceptance among anthropologists of the present day. But, unfortunately, at the time M. de Perthes looked upon the matter as a question affecting only his personal veracity. It was taken out in his presence and, therefore, it must be authentic. Lady Prestwich tells us that it was a bitter



FIG. 3. NAULETTE JAW, SIDE VIEW (l)
After Dupont

disappointment to him that his English friends, "in acknowledging the fact of the human jaw having been truly found as described, yet refused to admit that it belonged to a remote antiquity."¹

M. G. DE MORTILLET ON THE FALSIFICATION OF
ANTIQUITIES IN FRANCE

In September, 1885, M. G. de Mortillet published in the journal called *L'Homme* a long article entitled "Faux Paléoethnologiques," in which he describes a number of systematic falsifications. From this article are culled the following instances of forgery as having occurred on French territory.

One of the most famous is that of M. Meillet, of Poitiers, who, though a man of education and a distinguished chemist, had become possessed of a mania

¹ *Loc. cit.*, p. 91.

for mystifications—"Mon plus grand plaisir, avouait-il cyniquement, est de foutre dedans les savants." The *Grotte du Chaffaud* (Vienne), the first which furnished an authentic sculptured bone of the Palæolithic period, had become a favourite and fertile source of this class of antiquities. Meillet, along with a friend of the name of A. Brouillet, directed his attention to this cave, and conducted excavations in it, the result of which was published in the autumn of 1864, under the title of *Époques antédiluviennes et celtiques du Poitou*, an octavo volume with fifty plates. These plates represented, among some



FIG. 4. ELEPHANT FROM CHAFFAUD BY MEILLET (½)

ordinary relics characteristic of the later Palæolithic period, a number of objects so strange and grotesque that they at once attracted attention and roused suspicion as to their genuineness. Fragments of bone found in the cave had carved on them figures of animals in a style of art totally unlike, and much inferior to, that of the authentic specimens. For example, the mammoth, represented by Fig. 4, will be at once pronounced a gross



MAMMOTH ENGRAVED ON A PIECE OF IVORY. LA MADELAINE.

caricature of the art of the Cave-men when placed in comparison with the famous engraving of that animal from La Madeleine (Plate I.). Other bones had what appeared to be incised lettering (Fig. 5), which turned out to be imitations of Hebrew characters from an alphabet which only came into use about the ninth century of



FIG. 5. INSCRIPTION ON BONE BY MEILLET ($\frac{1}{2}$)

the Christian era. Besides, they did not represent words, but isolated letters, some of them being actually inverted. Meantime Meillet had got rid of his collection advantageously and disappeared, but his companion, on recognising the fraud, established his own good faith in the matter.

At the beginning of 1881 a similar attempt at imposition on a large scale occurred at Beauvais, in the north of France. At a meeting of the Société d'Anthropologie de Paris, held on the 3rd of February, it was announced by a man of unquestioned honesty that a veritable cemetery, containing hoards of objects of the Stone Age,

had been discovered. The relics reported from these discoveries, amounting to some 14,000 specimens, had been carefully collected by a dealer of antiquities, already favourably known as the author of a small treatise on



FIG. 6. FORGED FLINT AXE FROM BEAUVAIS ($\frac{1}{2}$)

pottery. The happy owner of this *trouvaille* had sketched the principal objects, and proposed to publish a great work on the subject. The flint objects exhibited at the meeting were of the most fantastic shapes—daggers, handled axes (Fig. 6), suns, moons, stars, forms of

animals, and other decorative designs; in short, everything that the most ardent antiquary could desire. Moreover, their authenticity was attested by some respectable magnates of the town—"magistrats, fonctionnaires, riches industriels, artistes, etc." But notwithstanding all this display of disinterested evidence, the fraud was clearly established, not only by evidence of the non-existence of the cemetery, but by the detection of the forgers in the act of fabricating their pretended relics.

The following incident, communicated to M. de Mortillet by M. Lartet himself, shows how readily even experts may be taken in when the falsification is the production of one who knows what kind of object is most likely to have the desired effect. The Museum of St.



FIGS. 7 AND 8. ELEPHANTS INCISED ON BONE (MODERN)

Germain contains a bone plaque, showing on both sides (Figs. 7 and 8) the outline of an elephant, which has the following history. When MM. Édouard Lartet and Henry Christy were engaged in their earlier explorations in the caves of the Dordogne, they lodged in the hotel of a M. Laganne, an intelligent and well-to-do man. During the long autumn evenings the archæological discoveries in the district were frequently the subject of discussion, and on one occasion—some sceptical person having suggested that the explorers were the victims of a mystifica-

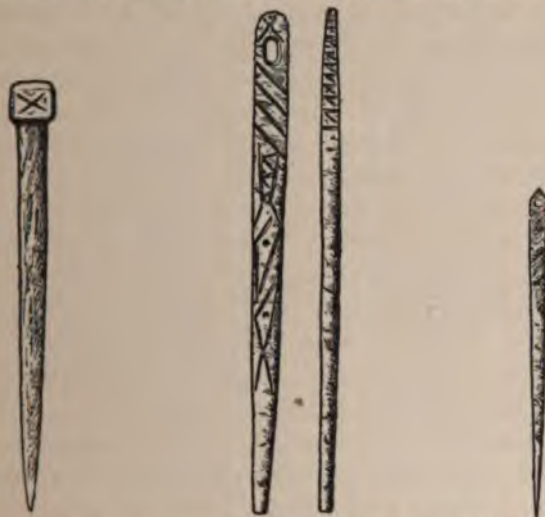
tion—MM. Lartet and Christy maintained that no one could cheat them, and offered to stand champagne if anyone succeeded in doing so. "I take up your bet," said their host Laganne. A few days later Laganne appeared at his hotel covered with mud, like one who had passed a day in exploring a cave, and carrying a bag of bones and flints which he emptied on a table before MM. Lartet and Christy. Several specimens were selected and washed, and among them was the above-mentioned bone plaque ornamented with the outline of an elephant on both surfaces. Both explorers were greatly delighted with the discovery of this fine specimen, and had no misgivings about its genuineness. At last Laganne triumphantly said, "Très bien, vous y êtes pris; offrez-moi le champagne, c'est moi qui ai fabriqué la pièce devant laquelle vous vous extasiez."

It seems that M. Édouard Lartet had preserved this fabrication, and only showed it to his most intimate friends. After his death it fell into other hands without a history, and was figured in *Materiaux* for 1874 as a genuine relic, from which the present illustrations are copied.

FORGED OBJECTS OF BONE FROM LAUGERIE-BASSE

In *L'Homme* (1886, p. 29) there is a short notice of some spurious bone objects said to have been found in the well-known Palæolithic station of Laugerie-Basse (Dordogne). The rarity of bone relics, especially those ornamented with engraved designs, and the high price such antiquities brought in the market, induced some venturesome persons to supply the demand by manufacturing certain objects, such as lance-points, needles, pins, etc., out of the osseous remains of the Palæolithic fauna so readily found in the Dordogne caves. Of these forgeries M. de Mortillet has figured three examples.

The bone pin (Fig. 9) he regards as a crude imitation of a Roman pin, and not a production of the prehistoric period at all. The large needle (Fig. 10) is both as regards size and coarseness of ornamentation unlike anything previously known among Palæolithic remains. The small needle (Fig. 11) shows evidence of having been



FIGS. 9, 10, AND 11. FORGED BONE PIN AND NEEDLES
FROM LAUGERIE-BASSE ($\frac{2}{3}$)
After De Mortillet

manufactured from a fragment of bone which had been regularly squared by a metal saw, while the transverse striæ on the parts around the eye and the point clearly indicate the work of a modern file.

M. W. WAVRE ON THE FALSIFICATION OF LACUSTRINE ANTIQUITIES

The discovery of so many remarkable lake-dwelling remains in Switzerland afforded great opportunities for the manufacture of spurious objects, because, amidst so

much wealth of prehistoric finds, it took some time and experience for skilled antiquaries to learn how to distinguish between the true and the false. In 1886 Dr. Gross, the eminent *lacustreur* of Neuveville, communicated to the Anthropological Society of Vienna a condemnatory notice of the so-called "Horn Age" with eighteen figures of false antiquities. This article was a reply to one by R. Forrer, editor of *Antiqua*, in the previous number of their *Proceedings*,¹ advocating the reality of the "Horn Age," as well as to another in *Antiqua*, 1885, entitled "Zur Aechtheitsfrage der punktierten Horn und Knochen objecte."

I have, however, before me a more important article than any previously published on the subject of lacustrine forgeries, viz. "Falsification d'Antiquités Lacustres," by W. Wavre, Keeper of the Antiquarian Museum at Neuchâtel. This interesting brochure appeared in the *Musée Neuchatelois*, 1890, with two plates of illustrations of the forged objects. These illustrations are here reproduced on a smaller scale than the originals, and with as much of the text, mostly in abstract, as is sufficient to retain the continuity of the story M. Wavre has told.

M. Wavre begins his paper with the following introductory remarks—thus translated :—

"It was not four years after the palafittes of our Swiss lakes had been discovered and yielded a quantity of relics of the highest interest when iniquitous forgers, allured by the opportunity of gaining money, utilised their skill in manufacturing forged objects, which they spread far and wide. Such falsifications were even described and illustrated in the pages of some learned but too credulous antiquaries, who, had they exercised a little foresight and prudence, ought never to have taken up pen or pencil on the subject. Since then up to the present day these forgers have not slumbered over their business ; and

¹ *Mitt. der Anth. Gesell. in Wien*, 1886.

already we can divide the history of their operations into four chapters, corresponding to four distinct phases in the evolution of this nefarious industry. Not satisfied with having invented new types, they had the audacity to conceive and promulgate, far from the haunts of savants, a new Age anterior to that of Stone, a sort of appendix to the *Reindeer period*, which, undeterred by the fear of ridicule, they announced under the plausible name of the 'Horn Age' (*Âge de la Corne*).

"We will pass successively in review, in their chronological order, the forgeries of the railway workmen at Concise, in 1859; the productions, for the most part in bronze, of the *Fabrique d'Yverdon*, about 1879; in the third place we will take part in watching the flourishing epoch of falsification—the development of the '*Âge de la Corne*' on the Fribourgian shore of Lake Neuchâtel—and its subsequent emigration to Cortaillod on the opposite shore; we will see journals proclaiming its auspicious birth; then we will take cognisance of Press comments, the discussions at the Historical Society, the results of special investigations made on the spot, and a lawsuit before the Federal Tribunal; at last we will demonstrate the complete collapse of this ridiculous (*biscornu*) Age which was vaunted from 1882 to 1885. In conclusion, we will say a few words on the latest and more fantastic phase of this kind of forgery, which gave birth to idols, various objects made of carbonised wood, stone moulds of impossible objects, and lastly we shall see how the forgers were led to make false inscriptions, which ultimately became the means of convicting and condemning them to imprisonment in the old Chateau of Estavayer, on the 26th July, 1887."

Readers will find in *Lake Dwellings of Europe* (p. 54) a short account of the vast quantities of relics, chiefly of the Stone Age, brought to light during the construction of the railway at Concise in 1859, and of the falsifications that were ultimately resorted to by the workmen as the genuine antiquities became scarce. At first these fabrications were comparatively harmless. As the stone axes and other implements were discovered minus their

handles, the workmen merely adapted new ones from the numerous portions of deer-horn found in the mud, for the simple reason that the completed implement fetched a higher price from visitors. But by degrees strange and odd-looking objects were produced. Stone implements recently manufactured from ordinary pebbles, flint flakes roughly chipped like saws, teeth of animals, daggers and knives of bone, etc., were inserted into handles of real lake-horn, and the fantastic objects thus produced were palmed off on the unwary as genuine lacustrine relics. No less than nine specimens of these forged productions are figured on Plate II.

In 1859 a skilled mechanic started a factory of ancient bronzes at Yverdon, but his productions were speedily recognised to be forgeries, and, of course, his business was not a success. One of his forgeries was a knife, the blade of which was distinctly after a Roman type. Another was an arrow-head, which had been cast from a mould made with a wooden model; but unfortunately for our skilled mechanic the bronze casting (Plate III., Fig. 8) showed the veins and fibres of the wood, and thus its real origin was detected.

But it was in the art of manufacturing lacustrine horn into the semblance of archaic objects that the Swiss forgers attained their greatest success. This material when freshly dug up from the mud is soft, and in this condition it is easily carved or worked into any required shape. M. Wavre's description of the rise, progress, and final collapse of the *Âge de la Corne* is an instructive and amusing document, of which the following is a short abstract.

In 1882, and onwards, there began to appear certain relics made of bone and deerhorn, artistically worked, and decorated with hollow points, arranged systematically in such a way as to remind one of certain cup-marked

PLATE II



FALSIFICATIONS OF ANTIQUITIES AT CONCISE
All about $\frac{3}{4}$ natural size. (After M. Wavre)

stones (Plate III., Figs. 2-4, 6, 7, 9-20, 22-30). Among them were to be seen especially tynes of horns perforated at the tip with a small hole for suspension, and containing at the other end some kind of implement, sometimes a charming little jade-axe (Plate III., Fig. 10); also elegant bracelets ornamented with a combination of dots and lines curiously arranged. When asked as to the origin of these relics the invariable answer was that they came from the station of Forel. These supposed antiquities were for sale in a bazaar in Neuchâtel at exorbitant prices, and sometimes offered at people's houses. A large quantity was sent in the direction of Germany. One significant fact about these antiquities was that, instead of becoming scarce as time went on, they rapidly increased both in number and variety. Among them were pins with variously shaped heads, harpoons, portions of bridle-bits, goblets, neck-collars, daggers, spoons, rings, etc. One day a spoon was exhibited having the mouthpiece to one side of the horn, so that it could only be used with the left hand. Then came knives like paper-cutters, without ornamentation, but always with a hole at one end for suspension (Plate III., Fig 2). The elements of ornamentation were also increased, and their combinations became more complex. To the original dots and lines were now added spirals, small crosses like the letter X, semicircles, zigzags, the *dents de loup* ornament, stars, suns, etc. Finally, on the 22nd October, 1884, an amulet was produced (Plate III., Fig. 1) ornamented with what appeared to be alphabetical characters.

"As to the term *Âge de la Corne*" (said the *industriel* who was both its inventor and the excavator of the relics), "it would be difficult to name it otherwise. Both at Forel and at Petit-Cortailod objects of bronze were found, then lower down came those of stone, and lowest of all those of horn. Consequently, would not one be

justified in concluding that horn objects represented the greatest age? If they are only now, for the first time, discovered it is because, since 1854, no one made excavations deep enough, such labour being both difficult and expensive."

What, however, puzzled thoughtful people was the intimate connection between the habitation of the inventor of the *Âge de la Corne*, and the discovery of the relics. When he lived at Forel, all the discoveries were made there. When he moved to Cortaillod, on the other side of the lake, it was at Cortaillod that the famous objects were found.

Meantime some respectable persons who had bought small collections of these horn objects became interested in the controversy, and, in order to keep a clear conscience, took part in the excavations conducted by the Cortaillod explorer, with the view of practically testing the truth of the sinister rumours current among the public. The result was that they also came upon similar objects, some of which they picked out of the débris with their own hands. To their unsophisticated minds nothing could be more convincing of the genuineness of the disputed horn objects. Henceforth, these same persons, though formerly sceptical, had no longer any doubt in the matter, and actually attested by their signatures the genuineness of the objects collected during the excavations. Thus encouraged, our explorer, in order to make his discoveries more widely known, addressed a letter to a newspaper¹ in which he said :—

"Some of the objects discovered form the collection of the Musée de l'Areuse ; others are actually in the Cantonal Museum of Neuchâtel, of which M. Wavre is conservator. All these objects, really beautiful works, are made of horn and bear various markings arranged in specific designs. Their extraordinary

¹ *Swiss Libérale*, December 1st, 1884.

PLATE III



SWISS LACUSTRINE FORGERIES, "ÂGE DE LA CORNE," ETC.

These objects are here reduced by about $\frac{1}{8}$ more than the figures indicate. (After M. Wavre)

well-preserved condition has for some time past given rise to much controversy. A number of amateurs and savants, at home and abroad, have expressed serious doubts about their authenticity and, nothing less than the presence of these amateurs, along with archæologists, was sufficient to dispel their suspicions. It is only since then that the authorities of museums, not only in Switzerland, but in foreign countries—among others those of the Musée de St. Germain, Paris—have admitted the real antique character of these discoveries."

But these precise statements were speedily contradicted. The Museum of Neuchâtel did not contain a single object from his excavations, and the horn objects which had been left for examination were returned to the explorer. The director of the St. Germain Museum, in a letter dated 9th December, 1884, stated that none of the objects sent to him were genuine:—"Dans une première lettre il avait déclaré qu'à ses yeux et aux yeux de M. Abel Maitre, qui les avait examinés avec soin, tous les objets étaient faux ou retouchés." He then went on to say that in regard to a further consignment there was one object which might possibly be genuine and that it was, probably, on this slender ground that the Swiss explorer made the above misleading announcement.

The Historical Society discussed the matter on the 16th December, 1884, when many arguments and reasons were adduced proving the objects in question to be forgeries. The secretary told one significant incident about the excavations conducted by the said explorer at Cortaillod. When he approached the trench where the workmen were digging, one of them, on a signal from the foreman, moved to a particular corner, and after one stroke of his mattock picked up something, and turning to the latter said, "*Je l'ai cassé.*" The object thus recovered in two fragments was a kind of diadem or collar (Plate III. Fig. 14), which was subsequently exhibited at the Society.

At the meeting when this took place a gentleman present, "*un honorable amateur*," declared that he had seen that very object *intact* a fortnight before it was found in the trenches in two portions.

Although the Society, as a body, had no doubt of the real nature and origin of the entire series of objects comprised under the name of *Âge de la Corne*, yet to convince waverers, "*et pour battre l'industriel sur son propre terrain*," they sanctioned the appointment of a special committee to conduct excavations at Cortaillod. The result of the explorations, carried out under these instructions and recorded in the *Musée Neuchâtelois* for 1885, p. 137, was completely negative. Among one hundred and twenty-five objects discovered there was not a single specimen like those of the so-called *Âge de la Corne*.

M. Wavre then goes on to examine the special methods adopted by the forgers in the manufacture of the false relics, and how, by a careful examination of the fresh cuttings, the polishing stuff, and hardened glue, they could be detected. On one occasion eleven specimens were submitted to the Société des Sciences Naturelles of Neuchâtel, and the report of three experts was that, while the material of the objects might be horn found in lake-dwelling stations, the objects themselves had been fashioned by modern instruments and processes.

For some time after this the mania for forgeries had a lull, and the products of the Horn Age industry languished as purchasers became more wary. But in face of the increasing demand for real antiquities the temptation to realise money so easily was too strong to allow the trade of the forgers to become altogether extinct, so a new departure was resolved upon. The articles now offered for sale consisted of perforated stone hammer-axes, of elegant forms, elliptical or egg-shaped, and with or without ornamental ridges; handsome vases of car-

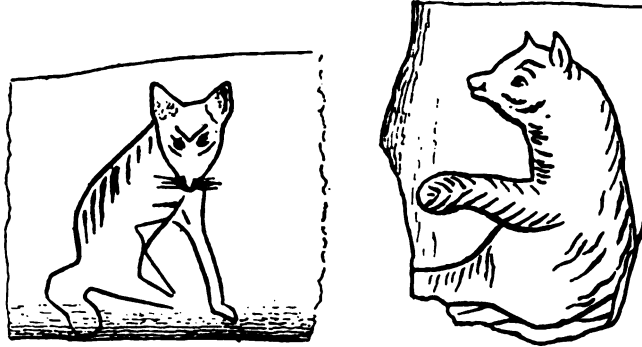
bonised wood; wooden handles and clubs of all sorts, also carbonised; moulds blackened with fire; idols in the form of quaint images, made of soft stone; also various objects of bronze, among them being a famous shield (Plate III., Fig. 21) known as the "bouclier lacustre," etc. A cup of carbonised wood when cut into was found to be made of fresh wood; and the fragment of a handle which still remained in the perforation of a stone hammer-axe turned out to be of burnt cork. At last the gang was hunted to earth, brought to trial, and sentenced to various periods of imprisonment. After all, the convicted were merely the dupes of worse rogues, who, posing as honest dealers, palmed off spurious articles on credulous antiquaries. This species of traffic was at one time so extensive that it is now believed there are few collections, especially those which found resting-places in foreign museums, which are not contaminated with more or fewer of these fabrications. Indeed, I have a strong suspicion that I myself was taken in by three objects, figured in my *Lake Dwellings of Europe* (Fig. 13, Nos. 17, 18, and 19), and described as having been found on the notorious station of Forel.

FORGED OBJECTS FROM THE KESSLERLOCH CAVE,
NEAR THAYNGEN, SWITZERLAND

After the excavation of the Kesslerloch Cave by Conrad Merk in 1874,¹ which yielded a large number of the relics of Palæolithic man, had been completed, two fragments of bone, supposed to belong to the bison and rhinoceros, were picked up by a labourer from the heap of rubbish. One of these had engraved on it the figure of a fox (Fig. 12), and the other that of a bear (Fig. 13), both animals being represented in a sitting attitude. "The mode, however, in which the figures are carved," says

¹ *Excavations at the Kesslerloch*, translated by John Edward Lee, 1876.

Mr. Merk, "betrays the hand of an unpractised artist, for these drawings want the nicety and correctness which the others possess in the highest degree." Notwithstanding this peculiarity in workmanship they were accepted as genuine both by Rüttimeyer and Keller. Mr. Lee, however, appends a note to his translation of



FIGS. 12 AND 13. FORGERIES FROM THE KESSLERLOCH CAVE

Mr. Merk's report, calling in question their authenticity. Since then both specimens have been proved to be forgeries, as Professor L. Lindenschmit has shown that they were coarse copies of two designs of Leutemann which appeared as illustrations in a small popular book published in 1868, under the title of *Thiergärten und Menagerien mit ihren Insassen*.¹

THE BREONIO CONTROVERSY

Early in 1885 Professor Pigorini described and figured in the *Bullettino di Paletnologia Italiana*² a large triangularly shaped flint arrow-head, with a comparatively small tang. This object (Fig. 14) was found in a cave in the mountainous district of Breonio, some ten miles to the north of Verona. It measures about 10 inches in length,

¹ *L'Homme*, 1885, p. 520.

² Vol. xi. p. 33, 1885, and Plate IV.

and weighs over $3\frac{1}{2}$ lbs. (1·71 kil.). As such an object could not have been used as a weapon, Pigorini conjectured that it might have some religious signification. He also announced in the same article (as well as previously at the R. Accad. dei Lincei, 18th January, 1885) the discovery by Stefano de Stefani, in the same district, of a number of other flint implements unlike any hitherto

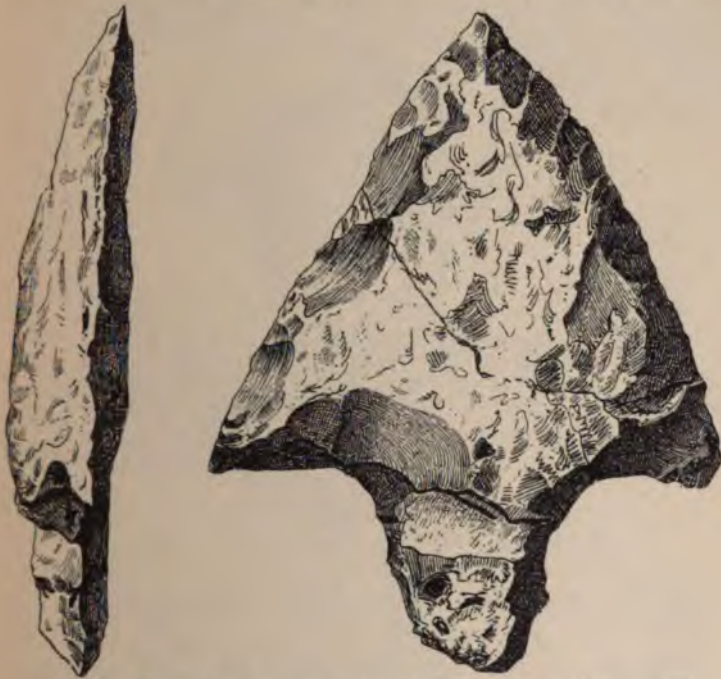


FIG. 14. FLINT ARROW-HEAD FROM A GROTTO NEAR VERONA ($\frac{1}{8}$)

found in Europe, except one or two objects from Russia (Fig. 20), which were figured in a book by Count Ouvároff. In another article of more recent date¹ the professor expressed the opinion that these implements (*selci di tipi*

¹ *Bull.* xii., 1886, p. 79.

strani) were manufactured as late as the beginning of the Christian era.

About the same time, and in the same journal,¹ Chierici published an article on a particular form of stone axe (*ascia lunata*), said to have been found at Cumarola, near Modena, having a semicircular cutting-edge and a projecting handle (Fig. 15), which he maintained to be an Italian, instead of an American type, as was formerly supposed. He supported this view by a reference to

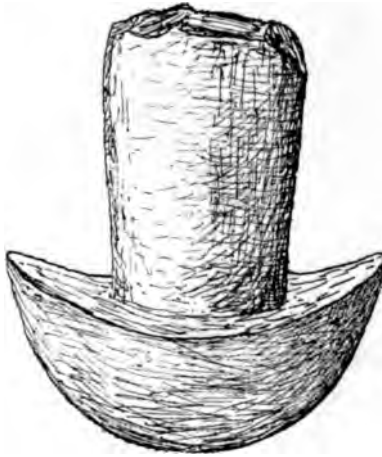


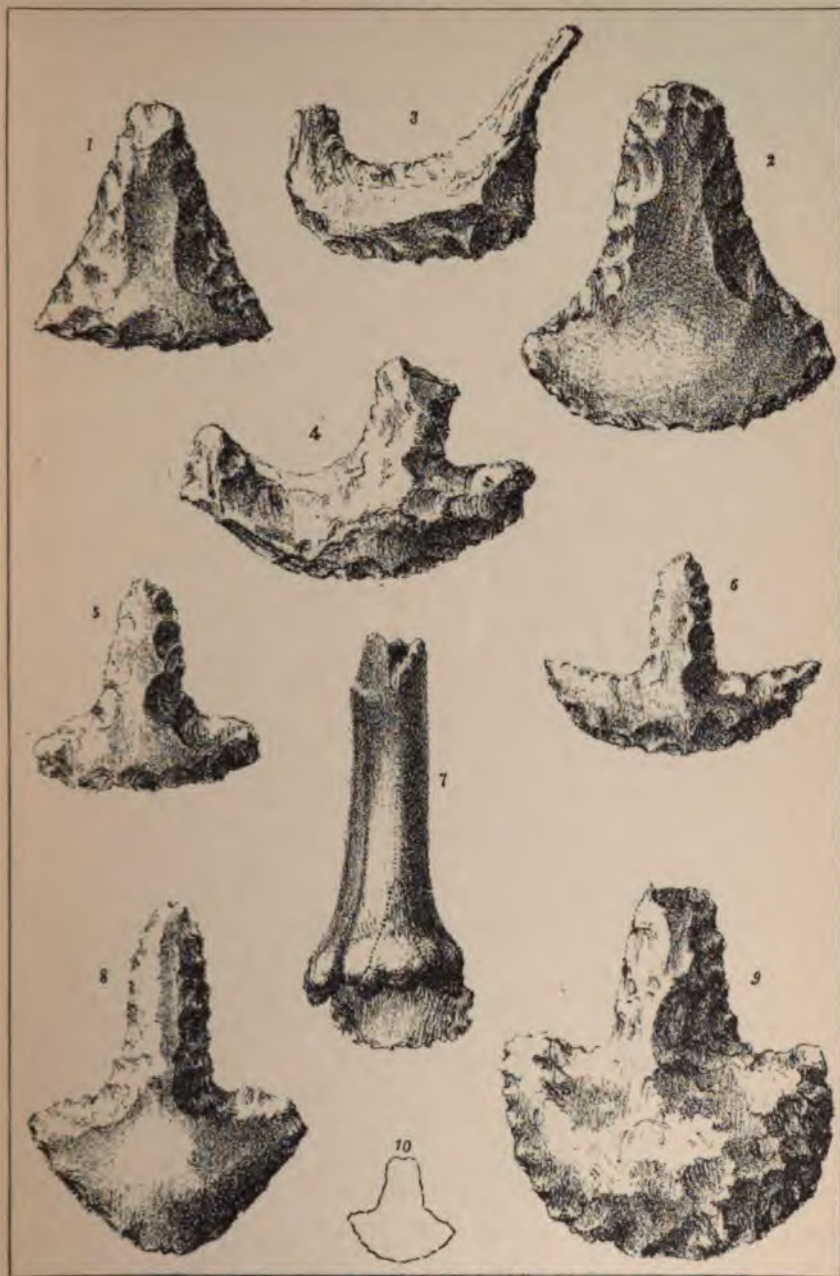
FIG. 15. STONE AXE FROM CUMAROLA, MODENA (½)

De Stefani's discoveries at Breonio, among which were several flint axes of the Cumarola type (Plate IV.), the only difference between them being that the latter were chipped instead of being polished. Coincident with Chierici's article appeared that of De Mortillet on "*Faux Paléoethnologiques*,"² in which the Breonio strange forms of flint implements are characterised as falsifications. Then began one of the liveliest archæological controversies of modern times, quite on a par in its inter-

¹ *Bull.* xi. p. 129, 1885.

² See p. 37.

PLATE IV



FLINT AXES ("ASCIA LUNATA") FROM THE VERONA DISTRICT (1)

national character with that of the human jaw of Moulin-Quignon. On the Italian side were ranged Chierici, De Stefani, Strobel, Pigorini, and Castelfranco—all archæologists of the highest standing—none of whom had any hesitation in accepting the Breonio finds as genuine relics of some indefinable period of past ages. It is unnecessary here to dwell on the details of the successive skirmishes of these belligerents, as the forces finally withdrew without coming to any decision.

Pigorini replied to the charge of falsification¹ by stating that De Mortillet had not properly qualified himself to pronounce an *ex cathedra* opinion on the relics in question, as he had not seen the originals, nor visited the locality, nor studied the deposits in which they were found, nor seen any of them *in situ*.

Later on² came a certificate from Professor Strobel to the effect that he had seen and examined the Breonio flints, and was persuaded they were not modern fabrications (*non sono punto di moderna fattura*).

Before proceeding further, let me interpolate a few categorical facts about Breonio and its remarkable flint implements. These are culled from notes made by the late Mr. T. Wilson, of the Smithsonian Institution, Washington, after a visit to the locality, and communicated by him to the anthropological section of the "Congrès de l'Association Française pour l'Avancement des Sciences," held at Nancy, August, 1886.

(1) From the character of the archæological remains previously found in the district, it is indisputable that prehistoric man inhabited the province during Palæolithic and Neolithic times.

(2) Flint of every description—brown, dark yellow, and red—is abundant in the country. The brown is the most common, but it does not lend itself well to chip-

¹ *Bull.*, 1885, p. 171.

² *Bull.*, 1886, p. 64.

ping, nor does it yield these long knife-flakes so well known elsewhere.

(3) The implements of strange types (*forme curiose*), are found chiefly by a local man nominated by the authorities to conduct such excavations. Except this man, or those employed by him, almost no other person, either peasant, shepherd, labourer, or farmer, has ever found a specimen.

(4) They have been found by this man scattered indiscriminately in all stations of whatever period—Palæolithic, Neolithic, Bronze, and Iron—and even on surface stations where no excavations were being made.

(5) Mr. Wilson examined over one hundred pounds of worked flints from caves on the banks of the Molino, but not a single specimen of the *forme curiose* was among them; and the excavator said he had never found anything of the kind. Moreover, during an investigation extending over three days, with the assistance of all the guides and the contractor, he found only points, scrapers, broken axes, and flakes, precisely similar to the ordinary forms from prehistoric stations.

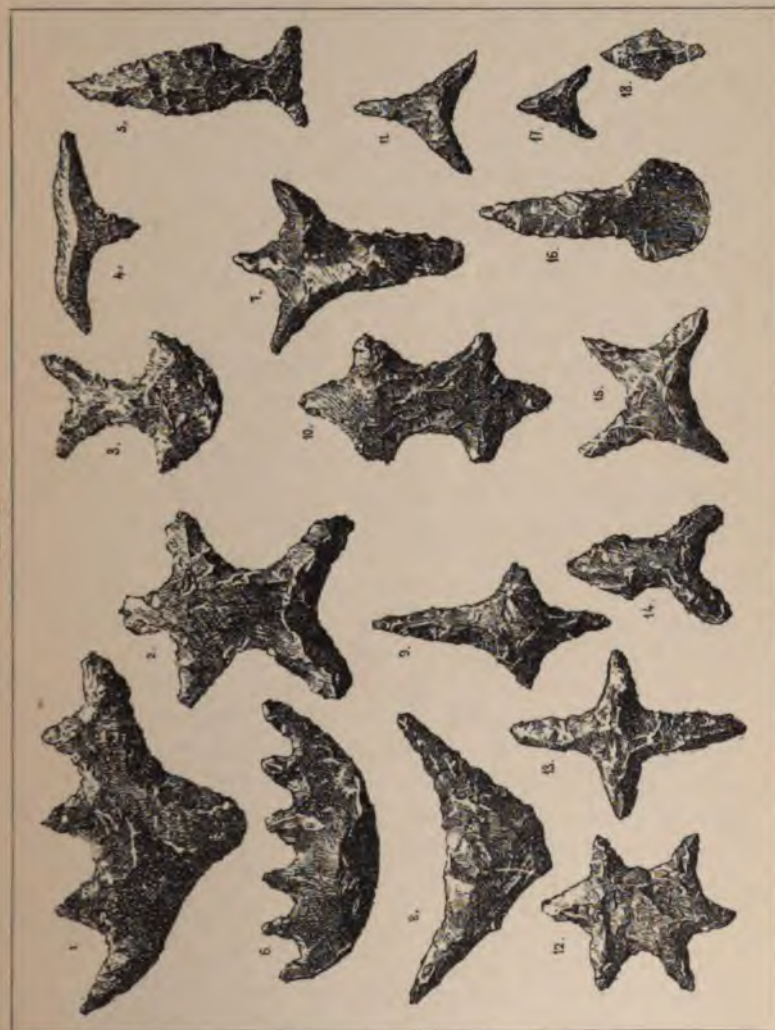
(6) In the vicinity there are, or were up to recent times, factories for making gun-flints and strike-a-lights, so that the art of chipping flint was well known to many persons.

(7) The *forme curiose* are almost all of brown flint, which takes on scarcely any patina or varnish, so that from appearance it is almost impossible to distinguish ancient from modern specimens.

(8) Every person in the district believes in the authenticity of the questioned specimens, and in the *bona fides* of their discoverer.

In order to give my readers some idea of the fantastic forms of these strange implements, I have reproduced (Plates V. and VI.) two of De Stefani's plates of illustrations, showing a large number of specimens. They were

PLATE V



SPECIMENS OF FLINT OBJECTS FROM BREONIO ($\frac{1}{2}$)
After Stefano de Stefani

found in the "grotta dei Camerini," in the Commune of Breonio.¹

The next move in the controversy was by De Mortillet, who not only repeated his opinion of the Breonio finds,² but blended with his arguments no small amount of sarcasm. Breonio is, indeed, he writes, a most convenient station—"C'est une station bien complaisante." It contains all that has been known elsewhere, and something more; and all types are found in the same undisturbed layer. Is it to make sport for the clericals that the Stone Age is brought down to the beginning of the Christian era? If it be desirable to advocate the theory of votive objects, ample evidence is found in Breonio. To prove that a stone axe of an American type (Fig. 15) is Italian, it is only necessary to go there to find several specimens (Plate IV.). In fact, this wonderful locality will prove anything you wish!

De Mortillet found a simple but natural explanation of all difficulties in the existence of some cunning accomplice (*rusé compère*), who virtually sold the objects, the price paid being a charge for the excavations. He thought this theory more probable, since P. Orsini³ had shown that, up to recent times, gun-flints and strike-a-lights were manufactured in the district.

As a counterblast to the above there appeared shortly afterwards⁴ the following certificate of the genuineness of the Breonio discoveries from Professor Pompeo Castelfranco, inspector of monuments and excavations at Milan, which I give *in extenso*, as it conveys a general idea of the different stations in which the questionable objects were found:—

"SANT' ANNA D'ALFAEDO,

"8th September, 1886.

"In these days I have travelled over the various stations in the Commune of Breonio made known by my colleague, Cav.

¹ *Bull.*, 1888, p. 81.

² *Bull.* xii, p. 95, 1886.

³ *L'Homme*, July 13th, 1886, p. 385.

⁴ *Bull.*, 1886, p. 162.

Stefano de Stefani. I have visited with care *il còvolo* (shelter, hearth, or den) of *Ca de Per*, *la grotta delle Zuane*, the great encampment of *Scalucce*, the shelters (*i còvoli*) of *Sabbion*, *Fontanella*, and *Campana*, the field of *Paraiso*, and the hillocks of *Zivelongo*; I have glanced at the shelters of *Camerini* and *Roba*: I have made excavations at the workshop of *Campos-trino*, at the huts of *Loffa*, and at the *Scalucce*: I have questioned the authorities and notabilities of the country as well as the excavators. From the *tout ensemble* of my interrogatories, excursions, and excavations, I have formed the conviction that the discoveries of the well-merited De Stefani are of *extraordinary* palethnological importance. I have excavated with my own hands and seen extracted from virgin soil several stone objects of the strange forms which had at first surprised me. Among these were some small crosses, a flint comb with three points, arrow-heads with four wings, etc. Of course, in addition to these unusual forms, I have gathered in great numbers knives, chisels, axes, etc. (*coltellini*, *sgorbic*, *asse*, etc.) of the common type. I have no longer the least doubt in this new acquisition to Italian palethnology, and it is for me a real pleasure and a satisfaction to be able to contribute to it with my poor testimony.

“(Signed), POMPEO CASTELFRANCO.”

The above solemn declaration appeared first in the *Opinione* (September 15th), and, along with the number containing it, De Mortillet received a letter from Professor Castelfranco, in which he gives a most pathetic description of the discovery of a small cross with his own hands. But, from the following extract, which contains the principal details of this discovery, my readers will readily understand that it had little effect as an archæological argument on the mind of his sceptical opponent.

“Un des ouvriers, plus heureuse que l'autre et que moi-même, avait déjà trouvé une pointe de flèche très belle, et deux ou trois silex ovalaires; tout à coup je l'entends pousser une exclama-

tion ; il venait de trouver un silex en forme de croix. J'accours, le silex était là, dans sa main ouverte, encore tout sale de la terre fraîchement remuée. Saisi d'une pensée subite, car moi aussi j'avais eu de soupçons (qui n'en aurait pas eu ?) je lui ordonne de me céder sa place qui me paraissait bonne, et d'aller prendre celle que je venais de quitter. Le bonhomme obéit, mais, au moment de partir, il me demande s'il doit donner quelques coups de pioche pour remuer en grand le terrain, et m'éviter un peu de peine. Je refuse énergiquement et il s'en va.

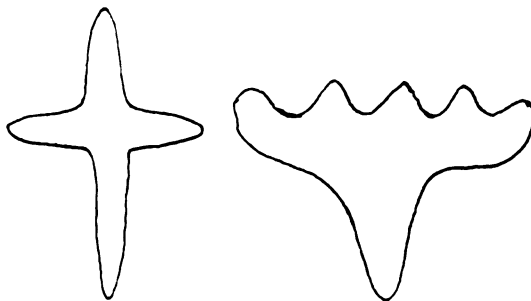
“Je reste là tout seul, devant une petite tranchée, ouverte de bas en haut, c'est-à-dire remontant le long du penchant très peu incliné de ce plateau. J'avais à la main une petite pioche à truffes ; j'attaque vigoureusement le terrain intact et je commence à trouver des éclats de silex, des lames, des grattoirs, etc. Je travaillais depuis environ dix minutes, avec la fièvre que nous avons tous éprouvée, lorsque tout à coup, à environ 25 cent. au-dessous de la surface, j'aperçois, dans la terre jaunâtre et dure, une petite pointe grisâtre assez finement retouchée. Je m'arrête et je regarde. Le terrain était intact ; par-dessus une touffe d'herbe et la croûte d'humus, par-dessous, et latéralement rien de suspect. Je tire mon couteau de ma poche et je gratte autour de cette pointe. Une autre pointe paraît. Evidemment c'est une croix ! J'appelle De Stefani qui était toujours assis sur sa pierre, à quatre ou cinq pas de moi. Il lève la tête et se rapproche un peu ; je pousse la lame plate de ma petite pioche à une certaine distance au-dessous du silex en question et je fais levier ; une motte de terre se détache ; je la reçois dans ma main. L'instrument mystérieux était là dans ma main, dans son enveloppe de terre. Il s'agissait de savoir si nous devions le laisser dedans ou l'en tirer.

“Notre hésitation dura bien cinq minutes pendant lesquelles je restais, ma motte de terre entre les mains, sans jamais vouloir la laisser toucher à personne. Enfin la curiosité fut plus forte que toutes les autres considérations ; je saisis la motte de terre à deux mains, je l'ouvris doucement comme on ouvre un livre, et la croix que voici (Fig. 16) parut devant mes yeux. Elle est aujourd'hui dans ma collection particulière. Je fourrai la croix dans ma poche, me précipitai sur le vieux De Stefani, l'embrassai à deux bras, et lui plaquai sur les joues les deux plus bruyants

baisers qu'un préhistorican ait jamais donnés à un autre préhistorican. Le pauvre homme pleurait de joie. . . .

"Les silex de formes étranges sont, à mon avis, beaucoup moins anciens que les autres ; ils touchent à l'ère des métaux. D'autres stations de la commune de Breonio ne renferment que des formes grossières, de rudes ciseaux et des grattoirs avec quelques silex ovalaires de petites dimensions. Point de formes étranges. A Breonio nous avons évidemment *plusieurs* périodes depuis les plus anciennes de la pierre jusqu'à celles de la Certosa et de la Tène."¹

In his reply to this De Mortillet, while referring to the cross and another flint object like a comb (Fig. 17), states, "Nous devons seulement déclarer dès à présent que ces pièces n'ont eu rien modifié notre opinion."



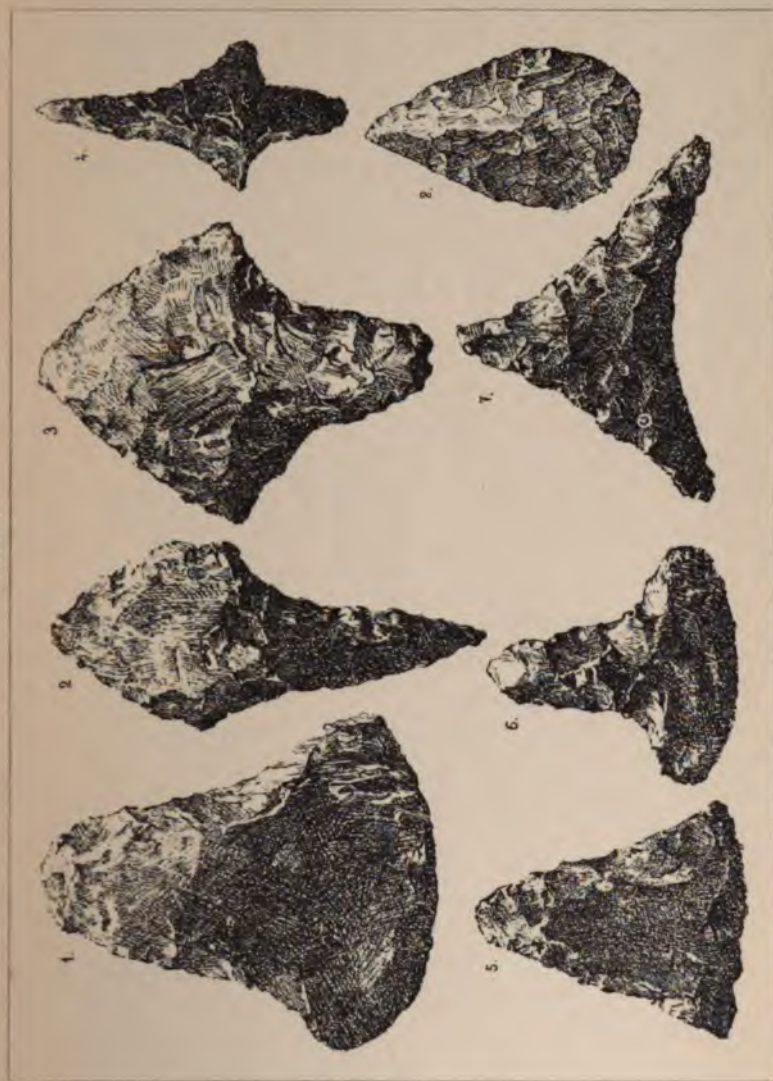
FIGS. 16 AND 17. FORMS OF FLINTS FROM BREONIO.

Meantime, Professor Pigorini² drew attention to the analogy between the Breonio flints and some equally fantastic objects of bone and limestone found in caves in the Valley of Mnikow, near Cracow, and described by Professor Ossowsky. But unfortunately the authenticity of the latter was also questioned by various archæologists in France and Germany, so that in regard to them an equally animated controversy was waged which even the favourable verdict of a special commission from the

¹ *L'Homme*, 1886, p. 579.

² *Bull.*, 1887, p. 95.

PLATE VI



SPECIMENS OF FLINT IMPLEMENTS FROM BREONIO ($\frac{1}{2}$)
After Stefano de Stefani

Academy of Sciences of Cracow did not settle.¹ Except some further discoveries of flints, notably at the station of Giare, Commune of Prun, and in the cave of the Camerini, Commune of Breonio (Plates V. and VI.), precisely of the same nature and character as those previously recorded by De Stefani and Professor Pigorini, and certified to be genuine by a number of Italian archæologists,² nothing of importance has transpired to materially affect the great Franco-Italian controversy. The only further reference to the subject is in the *Bullettino* for 1893, p. 341, where there occurs a short note by Professor Pigorini stating that flint objects, analogous to those of Breonio, were found at Volósova, in Russia.³ It will be remembered that at the beginning of the Breonio controversy, Pigorini referred to similar objects (Fig. 20) published in a work on *The Stone Age in Russia* by Count Uvároff. It will be therefore necessary to look more minutely into the archæological history of the discoveries at these two stations.

STRANGE OBJECTS FOUND IN THE CAVES OF MNIKOW,
NEAR CRACOW

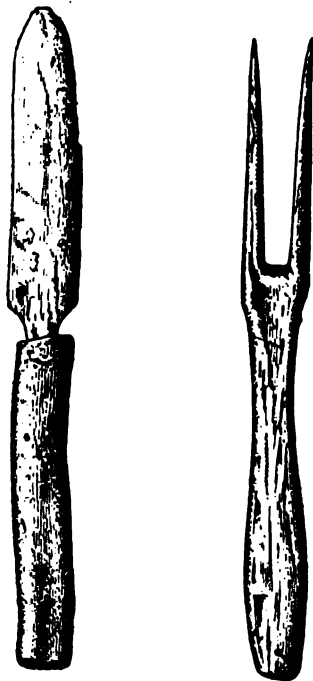
The controversy about the authenticity of certain objects found in the caves of Mnikow dates from the publication of a short article in *L'Homme*, 1884, p. 108, to the effect that M. Ad. de Mortillet, and M. E. Chantre, after seeing the Mnikow collection in the Museum of the Academy of Sciences at Cracow, pronounced many of the objects to be forgeries. This collection, which I saw some years ago, is a large one, and consists of a varied assortment of relics made of bone and stone, worked objects of flint, fragments of pottery, pendants, rude human figurines, incised outlines of mammals, etc.

¹ See *L'Homme*, 1886, p. 506.

² *Bull.*, 1888, p. 141.

³ *Congrès International, etc.*, 1892, vol. ii. pp. 248, 249.

Portions of bone were fashioned into pointed implements, and others had such bizarre shapes that their use was inexplicable. According to MM. de Mortillet and Chantre the lines of these carvings betrayed their modernity by not possessing the same old patina which



FIGS. 18 AND 19.
KNIFE AND FORK FROM THE CAVE OF MNIKOW, NEAR CRACOW ($\frac{1}{2}$)
After De Mortillet

was visible on the natural surface of the raw material, whether bone or stalactite.

Professor Ossowsky had a few years before published a brochure on these discoveries, with two plates of illustrations, two of the objects being a knife (blade and handle in separate pieces) and fork, both made of bone and of very

modern types (Figs. 18 and 19). Rumours that some of these objects were forgeries having got into several archaeological journals, gave great annoyance to M. Ossowsky and the authorities of the Academy of Sciences, under whose patronage the excavations had been conducted. Hence a committee of distinguished scientists was appointed to investigate the matter, the result of which was that, at a séance held on the 26th March, 1885, under the presidency of M. Lepkowsky, they unanimously pronounced "*l'authenticité indubitable de tous ces objets, sans aucune exception.*"

The next move in this matter was an article by Professor Pigorini¹ on the parallelism between some of the strange objects from Mnikow and those of Breonio, from which he inferred the genuineness of both sets of objects, for he did not think it admissible to suppose that the same forgers had been carrying on their operations in both places. To this De Mortillet replied that this argument was by no means conclusive; for, if at two distant points, at different epochs, objects of the same form could be fabricated, why under similar conditions could not forgers equally fabricate objects of the same form?²

THE PREHISTORIC STATION OF VOLÓSOVA

There are two powerful reasons for inquiring into the exact nature of the discoveries at Volósova, viz. that they have been appealed to as evidence in support of the genuineness not only of the Breonio flints, but also of the shale and shell "idols" and "amulets" of the Clyde valley in Scotland.³

The station is situated about a mile from the village of Volósova, on the left bank of the Oka, almost *vis-à-vis*

¹ *Rendiconti R. Ac. dei Lincei*, 16th Jan., 1887.

² *L'Homme*, 1887, p. 62.

³ See *Journal Brit. Arch. Assoc.*, Sept., 1901.

to the town of Mourom which, in a direct line, is only little over three miles distant. It occupies a ridge, now overspread with blown sand, but not many years ago it was covered with fir trees. The ridge is sufficiently elevated to be above the spring floods which periodically cover the lower grounds. Underneath the superficial white sands there lies a bed of dark solid sand, of various depths up to $3\frac{1}{2}$ feet, in which a vast quantity of the remains of a Stone Age population has been found.

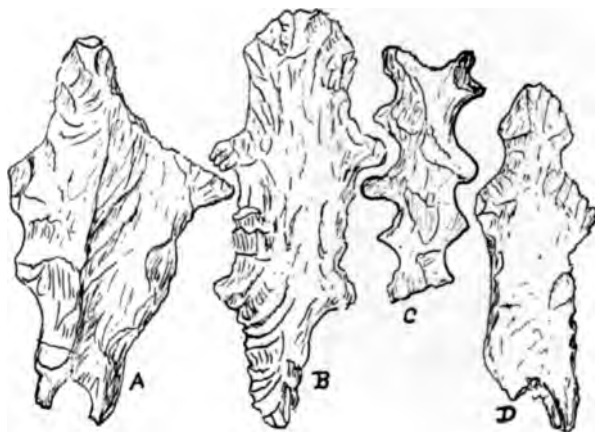


FIG. 20. FLINT OBJECTS FROM RUSSIA
After Ouvároff

The relics consist of various objects made of stone (chiefly flint) and bone, together with numerous fragments of hand-made pottery. The first important discoveries at Volósova were in 1870, which furnished a good deal of the materials utilised by the late Count Ouvároff in his work on the Stone Age in Russia (1881).

I have already referred to the fact that Professor Pigorini cited some of the flint objects in this work as being analogous to the Breonio flints, and therefore, according to him, valid evidence of their antiquity. De

Mortillet, however, characterised these Russian objects also as forgeries, stating that, although they were unfortunately illustrated in Ouvároff's book, they were not taken into the Museum at Moscow.¹ Shortly afterwards De Mortillet figured, in his famous article "Faux Paléoethnologiques" one of the said objects (Fig. 20, B) which he regarded as forgeries.

The largest collection of relics from Volósova has been made by Mr. P. Koudriavtsev, of Vladimir, who gave a description of it at the International Congress of Prehistoric Archæology held at Moscow, in 1892,² from which the present notes and illustrations are taken. In his preliminary remarks Mr. Koudriavtsev informs us that, as all the remains are uniformly distributed throughout the entire mass, and as the station has been frequently excavated by the peasants from whom he had purchased many (*beaucoup*) objects, it was impossible for him to describe his collection otherwise than under the categories into which they can be classified according to their usage, as follows:—

Fragments of pottery representing some 200 different vessels; arrow-heads of flint, 500 whole, besides a large number of broken or unfinished specimens; scrapers, 750 whole; borers, 380; knives, 280; nuclei, 5; saws, 30, the half being broken; polished axes, 44, many being broken; massive axes, 18 (7 only being whole); hammer axes, 3 (one only entire); plaques or pendants with a hole for suspension, 26, besides fragments: whetstones, 72, mostly broken; figured objects, 17, many of them broken or of undetermined form; objects of bone and perforated teeth, 29.

Among the fauna represented in the débris the following animals may be noted: Reindeer, elk, ox, otter, dog, marten, fox, hare, pig, beaver, badger, wolf, bear, etc.

¹ *L'Homme*, 1885, p. 154.

² Vol. ii. pp. 232-62.

As to the question of forgery, Mr. Koudriavtsev writes as follows :—

“ The first who commenced to gather arrow-heads and other ancient objects of stone at Volósova was Mr. Koznov, a merchant of Mourom, who engaged *gamins* to seek for



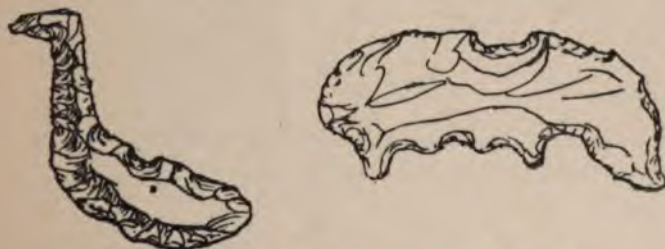
FIGS. 21 AND 22. FLINT OBJECTS FROM VOLÓSOVA, RUSSIA

them, and rewarded them with bonbons. I came after Mr. Koznov, and had to give them money. Later, when strangers began to visit the station, the price was raised, so that they sometimes demanded two or three roubles for an axe-hammer head. It was then that certain savants suggested the question of the possibility of the forgery of implements ; but such forgeries, if there had been any, must have been very rare. It is impossible for *gamins* to fabricate an arrow-point, or any object in worked flint, and all they could do was to polish an axe of schist, or to perforate a plaque of this material ; but it is very rare to find plaques and axes of this kind. One could

also sharpen a bone-point, but this would be easily detected. I myself noticed, on one occasion, such a point among the objects brought to me by a *gamin*, and, on reproaching the little vender, he merely laughed and ran away in haste."

So Mr. Koudriavtsev admits that forgery was practised, and if so, seeing that most of the objects in his own collection had been purchased from the peasants, the problem of forgery cannot be altogether eliminated from the discussion.

Among the Volósova relics, which have been paralleled with the Breonio flints and the Clyde "idols" and "pendants," are the following: Two human-like figures chipped out of a flat piece of flint, showing a head, neck, and short extremities (Figs. 21 and 22). One human figure of this description was found by the author in an



FIGS. 23 AND 24. FLINT OBJECTS FROM VOLÓSOVA

undisturbed part of the relic bed. Two forms representing a goose, and probably a pig (Figs. 23 and 24). A fantastic piece of flint (Fig. 26), chipped on both sides, is the only worked object that is comparable to the Breonio flints. Two plaques of schist, one plain with a hole for suspension (Fig. 25), and the other (Fig. 27), showing a nondescript ornamentation, may be compared with the shale pendants of the Clyde. Both these have a suspicious look, and, as they come within the category of objects which, according to Mr. Koudriavtsev, could

have been manufactured by "*gamins*," they can have little archæological value in a scientific argument. On the supposition that the human and animal flint figurines are authentic remains of the Neolithic people of Volósova, and I see no reason to doubt it, the following



FIGS. 25 AND 26. FLINT OBJECT AND STONE PENDANT FROM VOLÓSOVA

remarks by the Hon. John Abercromby seem to me to be the most rational explanation of their meaning and purpose:—

"The practice of chipping flattish pieces of flint into something approaching an animal shape is not confined by any means to the valley of the Oká. Far to the north, near the mouth of the Zolotitsa, which falls into the White Sea some hundred miles north of Archangel, there was a Neolithic workshop for the manufacture of flint implements, and among the small saws, knives, and arrow-heads there was found the silhouette of a seal in flint, now in the Historical Museum of Moscow. And two flint outlines are figured by the Count Uvárov, the actual finding-place of which is unknown, though they were bought in the government of Kazán. One (Fig. 20, B) has a large thick neck and head, a short thick body, four short legs, and a broad tail. It might be taken for the skin of an animal, such as a beaver, dried and stretched. What the other

represents I cannot even hazard a guess, though it is doubtless an animal form. The Volósovans also carved in bone. Mr. Koudriavtsev has in his collection the head of a swan in full relief, carved at the end of a long bone, the rest of which was left untouched. Another piece represents the head of a duck; a third a very small fish with a small hole of suspension through the tail. As it is difficult to believe that Neolithic man in a low state of civilisation, when it is not certain that even the

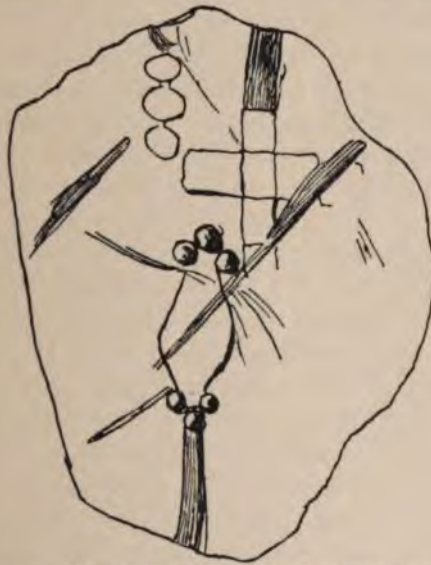


FIG. 27. STONE PLAQUE FROM VOLÓSOVA, RUSSIA

dog was domesticated, should take the trouble to hew out of flint and bone representations of men and animals merely to satisfy his artistic and creative instincts and faculties, some other reason must be sought for. It is more consonant with the extreme laziness of uncivilised man to suppose that he had a practical object in view, that the human and animal figures served as household gods or as personal amulets to secure luck when fishing or hunting."¹

¹ *Pre- and Proto-historic Finns*, vol. i. p. 71.

Upon the whole I fail to see the relevance of appealing to the discoveries of Mnikow or Volósova as supplying valid evidence for or against the genuineness of either the Breonio or Clyde finds, as there is very little similarity between any of the contrasted objects. That the Stone Age people of Volósova should manufacture human or animal forms out of flint is not so very remarkable, as we find such figurines made of clay in many other prehistoric stations in Europe, such, for example, as at Laibach in Carniola, Butmir in Bosnia, Tordosch in Transylvania.¹ Idols and amulets were, indeed, universally used in prehistoric times; and that the former assumed the forms of men and various animals is abundantly illustrated in Schliemann's *Ilios*. Forms of various animals well chipped out of flint have also been found in Egypt. Thus, Dr. Schweinfurth has quite recently figured a bubalis, a wild goat, and a sheep, beautifully chipped of flint, which were found in prehistoric graves of the early dynasties, or even a still earlier period.² Similar figures, including a flying bird, a serpent, a dog, a hippopotamus, have been recorded and figured by Professor Flinders Petrie as coming from the neighbourhood of Abydos. Objects which come under the same category are also described by the late Thomas Wilson as having been found in various parts of America.³ That, however, fantastic-shaped flints, like those from Breonio, should be found only in stations limited to one small area in Europe, but covering the whole range of prehistoric times from the Palæolithic period down to the Iron Age, is the inexplicable residuum of the Breonio problem.

¹ *Rambles and Studies in Bosnia, etc.*, p. 126.

² *Revue de l'École d'Anthropologie de Paris*, Nov., 1903.

³ *Prehistoric Art*, 1898, p. 437.

CHAPTER III

TERTIARY MAN IN CALIFORNIA

THE presence of man on the American Continent during the Quaternary period, though advocated on archæological grounds even before M. Boucher de Perthes succeeded in convincing the scientific world of his existence in Europe during that period, still remains *sub judice*. One of the most earnest and persistent advocates of the affirmative side of this question was the late Mr. Thomas Wilson, curator of the department of prehistoric archæology in the United States National Museum. At the International Congress of Anthropology and Prehistoric Archæology, held in Paris in 1900, Mr. Wilson read a paper on "The High Antiquity of Man in North America," in which the problem is thus formulated. "The existence of man in America during the Quaternary period, *i.e.* during an epoch which corresponded to the Palæolithic period in Europe, has been contested by some archæologists of the New World. Others (among which he classifies himself), while recognising that the evidence of the presence of a human being in the Pleistocene deposits of America is not sufficiently conclusive, nevertheless hold that certain facts cannot be explained by the present Indian occupation of the country (*par la seule occupation indienne à l'époque actuelle*)." But this is not a fair statement of the question at issue as hitherto understood and discussed by archæologists; for, if the so-called Calaveras skull be accepted as a genuine relic of the

period when the auriferous gravels of California were deposited, it would prove the existence of a highly developed man earlier than the Pliocene period. Yet this is what Mr. Wilson advocates in his paper. The archæological data which he selects as favourable to the high antiquity of man in the New World may be conveniently arranged under the following heads:—

(1) The discovery of human implements with the skeletons of extinct animals, as recorded by Dr. Koch and others.

(2) The finding of flint implements, of similar types to those of the Palæolithic period in Europe, in glacial gravels, as at Trenton, in the drift of the Delaware River.

(3) Figures of the mammoth incised on a shell and on a worked stone—"Lenape Stone."

(4) Human bones found in a hard breccia at Sarasota (Florida).

(5) The finding of human remains, bones of extinct animals, and a number of mortars, pestles, rubbing-stones, lance-heads, etc., in undisturbed gravels of the Tertiary period in California.

Although it is no part of the programme laid out for this work to discuss the general question of the antiquity of man in America, I think it desirable in this case to make a few remarks on the facts and arguments advanced by Mr. Wilson in support of his views. Of course, my chief object is to examine the claims of the "Calaveras skull," and its contemporary "finds," to great antiquity, because it has been suggested that false testimony, either in the form of a fraud or a hoax, has played an important part in the evidence. The attainment of my object will be facilitated by gaining some insight into the nature of the collateral arguments on which the high antiquity of man on the American Continent has hitherto been based. One noteworthy distinction between the anthropological

data of the Old and New Worlds is that the caves and rock-shelters of the former were the inhabited sites of a very ancient race, whose chief occupation was the hunting of wild animals, at a time so long ago that most of these animals no longer exist ; whereas such evidential materials are totally wanting in the latter. The bones and worked objects hitherto found in the caves of America belong, so far as my information goes, entirely to the Neolithic period. They have disclosed nothing comparable to the intermingling of the osseous remains of extinct animals with the multifarious débris of that highly artistic civilisation which characterised the Troglodytes of England, France, and other parts of Europe towards the close of the Palæolithic period.

With regard to Dr. Koch's discoveries it will suffice to give an extract from a paper by Mr. Charles Rau,¹ which bears testimony to the accuracy of the explorer's statements.

"In the year 1839 the late Dr. Albert C. Koch discovered in the bottom of the Bourbeuse River, in Gasconade County, Missouri, the remains of a *Mastodon giganteus* under very peculiar circumstances. The greater portion of the bones appeared more or less burned, and there was sufficient evidence that the fire had been kindled by human agency, and with the design of killing the huge creature, which had been found mired in the mud, and in an entirely helpless condition. The animal's fore and hind legs, untouched by the fire, were in a perpendicular position, with the toes attached to the feet, showing that the ground in which the animal had sunk, now a greyish-coloured clay, was in a plastic condition when the occurrence took place. Those portions of the skeleton, however, which had been exposed above the surface of the clay, were particularly consumed by the fire, and a layer of wood-ashes and charred bones, varying in thickness from two to six inches, indicated that the burning had been continued for some length

¹ *Smithsonian Report*, 1872, p. 395.

of time. The fire appeared to have been most destructive around the head of the animal. Mingled with the ashes and bones was a large number of broken pieces of rock, which evidently had been carried to the spot from the bank of the Bourbeuse River to be hurled at the animal. But the burning and hurling of stones, it seems, did not satisfy the assailants of the mastodon; for Dr. Koch found among the ashes, bones, and rocks *several stone arrow-heads, a spear-head, and some stone axes*, which were taken out in the presence of a number of witnesses, consisting of the people of the neighbourhood, who had been attracted by the novelty of the excavation. The layer of ashes and bones was covered by strata of alluvial deposits, consisting of clay, sand, and soil, from eight to nine feet thick, which form the bottom of the Bourbeuse River in general."

About one year after this excavation, Dr. Koch found at another place in Benton County, Missouri, in the bottom of the Pomme de Terre River, about ten miles above its junction with the Osage, *several stone arrow-heads* mingled with the bones of a nearly entire skeleton of the Missouriium. The two arrow-heads found with the bones—

"were," in the words of Dr. Koch himself,¹ "in such a position as to furnish evidence still more conclusive, perhaps, than in the other case, of their being of equal, if not older date, than the bones themselves; for, besides that they were found in a layer of vegetable mould which was covered by twenty feet in thickness of alternate layers of sand, clay, and gravel, one of the arrow-heads (Fig. 28) lay underneath the thighbone of the skeleton, the bone actually resting in contact upon it, so that it could not have been brought thither after the deposit of the bone; a fact which I was careful thoroughly to investigate."

Mr. Rau adds the following note on the above:—

"I am well aware that the reality of Dr. Koch's discovery has been doubted by some, although it is difficult to perceive why he should have made these statements, if not true, at a

¹ *Transactions of the Academy of Science of Saint Louis*, 1860, vol. i. p. 61.

time when the antiquity of man was not yet discussed, either in Europe or here, and he, therefore, could expect nothing but contradiction, public opinion being totally unprepared for such revelations."

Mr. Wilson, in defending the genuineness and importance of Dr. Koch's discoveries, cites Mr. J. W.



FIG. 28. FLINT WEAPON SAID TO HAVE BEEN FOUND BENEATH THE SKELETON OF A MASTODON ($\frac{1}{2}$)

Foster¹ as one who knew the explorer in his later years, and believed in his skill and integrity. On being questioned by Mr. Foster as to the possibility of an error he (Dr. Koch) assured him in the most solemn manner that his observations and statements were correct.

Analogous discoveries, suggesting that man was contemporary with the bison (*Bison occidentalis*) and mastodon, are also mentioned² as having been recently found at

¹ *Prehistoric Races of the United States*, p. 62.

² *Congrès International*, Paris, 1900, pp. 157, 158.

Wyoming (United States), and at Kimmswick (Missouri); but from the want of details no definite opinion can be formed as to their archæological value.

With regard to the subject-matter under the second heading, it cannot be doubted that there exists, throughout America, a large number of roughly chipped flint implements which bear some resemblance to the palæoliths of Europe. These are widely distributed, and are found, sometimes on the surface, and sometimes more or less buried in the soil; but, with the exception of form, there is no reliable evidence to prove that they are older than the common Neolithic arrow-heads and scrapers with which they are often associated. The implements discovered by Dr. Abbot among the sands and gravels at Trenton were, for a long time, accepted by many archæologists as Palæolithic, under the belief that the Trenton deposits were of glacial origin. Now that the superficial portions of these deposits are regarded, on the highest authority, as due to blown sands, it is contended that the so-called palæoliths were found in them and not in the deeper glacial strata. The whole subject was discussed in 1897 at the meeting of the American Association for the Advancement of Science held at Detroit, at which I was present. The result of this admirably conducted controversy was to leave no doubt in my mind that the implements from Trenton gravels were of the Neolithic period. Their similarity to those found on the sites of Indian camps, and elsewhere, in the neighbourhood was alone sufficient to taboo them as trustworthy evidence of the presence of man in the Quaternary period.

Under the third head Mr. Wilson figures a Fulgur shell showing the form of a mammoth obscurely outlined on one of its surfaces, with regard to which he writes: "Son aspect ne laisse aucun doute sur son ancienneté et l'on n'y observe pas de traces d'un travail récent." This

relic was found in a cultivated field in the vicinity of Holly Oak Station, Delaware, and consequently its history is of no archæological value. The "Lenape Stone" found in the neighbourhood of Doylestown, Pennsylvania, is 4 inches in length and $1\frac{1}{2}$ in breadth (Fig. 29). It is worked to a smooth surface, one of which shows the incised outline of an elephant along with some rude geometrical figures and scratchings (Fig. 30). It has two small perforations, each about an inch from its

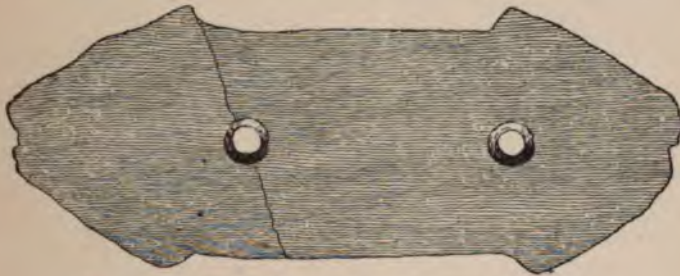


FIG. 29. LENAPE STONE (PENNSYLVANIA, AMERICA)

extremities, thus reminding one of the stone bracer of the Neolithic period of Europe.

With regard to the reported discovery of human bones in a hard breccia at Sarasota, the details are too indefinite to call for any remarks.

We now come to consider the antiquities reported to have been found *in situ* in the auriferous gravels of California, chief among which is the celebrated "Calaveras skull." Mr. Wilson gives an account of the circumstances in which the skull was found, and, after controverting the objections raised against its authenticity, accepts it as the genuine remains of a man who lived at the time when these gravels were being deposited. That the skull came to be discredited he attributes, chiefly, to the fact that the presence of man at that early time militated against

biblical ideas, and also to the satirical effusions of Bret Harte, who ridiculed the idea of its great antiquity. The following couple of verses, from his geological address "To the Pliocene Skull," will show Mr. Harte's method of treating this terrible business :—

"Speak, thou awful vestige of the earth's creation,—
Solitary fragment of remains organic!
Tell the wondrous secret of thy past existence,—
Speak, thou oldest primate!

"Which my name is Bowers, and my crust was busted
Falling down a shaft in Calaveras County,
But I'd take it kindly if you'd send the pieces
Home to old Missouri!"

It would be utterly hopeless to attempt to wade through the vast amount of literature bearing on this controversy—scattered, as it is, in so many books and journals on



FIG. 30. INCISED FIGURES ON LENAPE STONE

both sides of the Atlantic—or to present a digest of the arguments of the various disputants. But this decision may be rather an advantage to my readers than otherwise, because, so far as I have looked into the matter, the disputants seem to be ringing the changes on the same materials. Nor would a detailed criticism of evidence,

primarily based, to a large extent, on observations and statements of inexperienced and non-scientific witnesses, be of much value—for there can be no retrospective examination of the precise relation of the skull to the stratified gravels in which it was found. Probably the discoverer never thought of strata, or of looking into such a matter, yet this is the crux of the whole controversy. The question is not whether a certain person found the skull in gravel at the bottom of a deep mining shaft, but how, and when, it came to be placed there. My object will be best attained by placing against each other an epitome of the evidence, as it commended itself to two opposing scientists whose *bona fides* is undoubted.

Writing in 1892 on the affirmative side of the problem, Professor G. F. Wright, D.D., LL.D., thus records his opinion of the anthropological materials bearing on the antiquity of man in America, from which it will be seen that he puts a high value on the evidence furnished by the "Calaveras skull."

"Most interesting evidence concerning the antiquity of man in America, and his relation to the Glacial period, has come from the Pacific coast. During the height of the mining activity in California, from 1850 to 1860, numerous reports were rife that human remains had been discovered in the gold-bearing gravel upon the flanks of the Sierra Nevada Mountains. These reports did not attract much scientific attention until they came to relate to the gravel deposits found deeply buried beneath a flow of lava locally known as the Sonora or Tuolumne Table Mountain. This lava issued from a rent near the summit of the mountain-range, and flowed down the valley of the Stanislaus River for a distance of fifty or sixty miles, burying everything in the valley beneath it, and compelling the river to seek another channel. The thickness of the lava averages about one hundred feet, and so long a time has elapsed since the eruption that the softer strata on either side of the valley down which it flowed have been worn away to such an extent that the lava now rises

nearly everywhere above the general level, and has become a striking feature in the landscape, stretching for many miles as a flat-topped ridge about half a mile in width, and presenting upon the sides a perpendicular face of solid basalt for a considerable distance near the lower end of the flow.

"It was under this mountain of lava that the numerous implements and remains of man occurred which were reported to Professor J. D. Whitney when he was conducting the geological survey of California between 1860 and 1870. The implements consisted of stone mortars and pestles, suitable for use in grinding acorns and other coarse articles of food. There were, however, some rude articles of ornament. In one of the mining shafts penetrating the gravel underneath Table Mountain, near Sonora, there was reported to have been discovered, in 1857, a human jawbone, one portion of which was sent by responsible parties to the Boston Society of Natural History, and another part to the Philadelphia Academy of Sciences, in whose collections the fragments can now be seen.

"Interest reached a still higher pitch when, in 1866, an entire human skull with some other human bones was reported to have been discovered under the same lava deposit, a few miles from Sonora, at Altaville, in Calaveras County, and hence known as the 'Calaveras skull.' Persistent efforts were made soon after to discredit the genuineness of this discovery. Bret Harte showered upon it the shafts of his ridicule, and various other persons gave currency to the story that the whole report originated in a joke played by the miners upon unsuspecting geologists. These attacks were so successful that many conservative archæologists and men of science have refused to accept the skull as genuine.

"Recent events, however, have brought such additional evidence to the support of this discovery that it would seem unreasonable any longer to refuse to credit the testimony. At the meeting of the Geological Society of America, at Washington, in January, 1891, Mr. George F. Becker, of the United States Geological Survey, who for some years has had charge of investigations relating to the gold-bearing gravels of the Pacific coast, presented the affidavit of Mr. J. H. Neale, a well-known mining engineer of unquestionable character, stat-

ing that he had taken a stone mortar and pestle (Plate IX.), together with some spear-heads (which through Mr. Becker he presented to the Society), from undisturbed strata of gravel underneath the lava of Table Mountain, near Rawhide Gulch, a few miles from Sonora. At the same meeting Mr. Becker presented a pestle (Fig. 31), which Mr. Clarence King, the first director of the United States Geological Survey, took with his own hands out of undisturbed gravel under the same lava deposit, near Tuttletown, a mile or two from the preceding locality mentioned.

"I was so fortunate also as to be able to report to the society at the same meeting the discovery, in 1887, of a small stone mortar by Mr. C. McTarnahan, the assistant surveyor of Tuolumne County. This mortar was found by Mr. McTarnahan in the Empire mine, which penetrates the gravel underneath Table Mountain, about three miles from Sonora, and not far from the other localities above mentioned. The place where the mortar was found is about one hundred and seventy-five feet in from the edge of the superincumbent lava, which is here about one hundred feet in thickness. At my request this mortar was presented by its owner, Mrs. M. J. Darwin, to the Western Reserve Historical Society of Cleveland, Ohio, in whose collection it now can be seen.

"These three independent instances, each of them authenticated by the best of evidence, have such cumulative force that probably few men of science will longer stand out against it."¹

Before proceeding to deal with Dr. Wright's statements and conclusions, which as regards clearness and definiteness leave nothing to be desired, I have a few preliminary remarks to make, chiefly by way of introducing a new combatant on the field of action, viz. Mr. W. H. Holmes, Head Curator of the Department of Anthropology, United States National Museum. Mr. Holmes has recently published an article² entitled "A Review of the Evidence relating to Auriferous Gravel Man in California," which

¹ *Man and the Glacial Period*, 1892, pp. 294-7.

² *Smithsonian Institution Annual Report for 1899*, pp. 419-72.

cannot fail to commend itself to all lovers of truth, on account of the spirit of fairness and courtesy which runs through all his critical observations, notwithstanding their deadly effect on the views of those who believe in the existence of Tertiary man on the evidence adduced from the auriferous gravels of California. The reasons which induced him to reinvestigate the subject are thus stated :—

“During recent years much has been said and written regarding the antiquity of man in America, and as opportunity has presented, I have engaged in the discussion of the subject, endeavouring to determine the exact value of the evidence brought forward by the various observers. By far the strongest body of data tending to establish the existence of man of great antiquity is that emanating from the gold belt of California, and first brought together by Professor James D. Whitney, State geologist of California, and published in his notable work on the auriferous gravels.¹ There is considerable literature embodying original observations outside this volume, the most important contribution being a paper by Dr. George F. Becker, published in the *Bulletin* of the Geological Society of America for 1891.

“For a long time I have entertained the idea of visiting the Pacific slope for the purpose of becoming personally acquainted with the region furnishing the evidence and with the people, so far as the hand of time has spared them, familiar with the golden era of California. I hoped at least to see enough to enable me to make up my own mind as to the value of the evidence, and it seemed within the range of possibility that something decisive in the way of new evidence, or of sidelights on the old, might develop—something that would open the way to a final settlement of the great questions at issue.”²

Mr. Holmes conducted the anthropological investigations, on which his review of “Auriferous Gravel Man”

¹ *The Auriferous Gravels of the Sierra Nevada of California*, Cambridge, 1879.

² *Loc. cit.*, p. 419.

is founded, in 1898, under instructions from the Secretary of the Smithsonian Institution.

As to the age of these gravels, it may be interesting to note that recent researches by the geologists of the United States Geological Survey have not only confirmed the correctness of Dr. Whitney's determinations on this point, but even "extended the gravel-forming epoch to cover the Miocene and probably the greater part of the Eocene, thus making comparisons with the close of the Glacial period hardly more reasonable than the attempt to include the whole group of phenomena within the period of biblical record."

The palæontological remains associated with the gravels consist of a number of species of animals, chiefly mammals (found in a fossil state), mastodon, elephant, rhinoceros, horse, camel, tapir, ox, llama, deer, wolf, and dog. "These," says Mr. Holmes, "are all of extinct species, and although some may have existed down to Post-Pliocene time, as indicated by Dr. Becker, they fall as a group naturally within the Neocene (Miocene-Pliocene) age." The fossil plants of the gravels are all relegated by experts to the same period. According to Professor Knowlton, not a single species can be identified with living forms.

On reaching the mining region Mr. Holmes directed his attention to the debatable materials from three different standpoints or lines of investigation.

First. The geology of the gravel deposits and the profound changes brought about by the mining operations.

"The great gold discoveries began with the influx of miners in 1849, and during the two or three succeeding decades the gravel deposits were dug over to an extent without parallel in the history of mining operations. They were first attacked by pick and pan, then sluicing was introduced, and later hydraulic operations were conducted on a grand scale. Tunnel mining

was also extensively carried on, and the mountains were pierced by countless shafts, sometimes so close together and so profound that it seemed almost that the mountains might collapse."¹

Second. A study of the implements and utensils from the general region was made in order to compare them with gravel finds. The result of this was to show that all the worked objects, said to have been found in the latter, had a decidedly modern aspect. The substantial identity of these implements with the familiar relics of the Californian tribes is made apparent by a series of sketches and photographs which Mr. Holmes has incorporated in his paper.

Third. The third line of investigation, viz. "the distribution of the aboriginal tribes, and their relation to the mining areas and mines," is so significant that I must quote his remarks in full:—

"Indian village-sites are scattered over the hills and tablelands, and ancient Indian sites were found everywhere. At Nevada City, Nevada County, a Digger Indian (Shoshonean stock) village was encountered on the margin of the tableland overlooking the great gravel mines a mile west of the city. Its people were engaged in gathering acorns and grinding them in mortars of various shapes. Some of the mortars were worn in outcropping masses of granite, or in large, loose boulders, while others consisted of flattish or globular masses of stone, more or less modified in shape by artificial means, and it was realised that, as the hydraulic work progressed in the mine below, this site might be undermined, and that one by one the utensils would drop in and become intermingled with the crumbling gravels, possibly to be recovered later with every appearance of having been embedded with these deposits when they were laid down unnumbered centuries before. One of the mortars reported by Whitney was obtained from a mine on the western slopes of this same hill, and it is easy to see how it could have rolled in from an Indian camp-site above, either before or during

¹ *Loc. cit.*, p. 420.

the prosecution of mining operations. The conditions observed here were repeated at nearly every mine visited in Nevada, Placer, Eldorado, and Calaveras Counties. At Forest Hill, Placer County, the Dardanelles mine, extensively worked in the early days by Richard Clark and others, has undermined and obliterated a half or more of a terraced spur or 'flat,' as such features are called in that country, formerly occupied by an Indian village. According to Mr. Clark, who still resides in Forest Hill, this site has not been occupied by the natives since work began in the mine in 1852, but an hour's search brought to light a dozen mortars and grinding-stones, twenty or thirty rubbing-stones and pestles, together with several varieties of smaller tools. As the ground of the site sloped toward the mine, most of the larger, and especially the rounder, objects must long since have rolled into the great pit, the gravel walls of which are on the one side upward of 200 feet in height. Many of the objects obtained by me were already in the gullies leading down to the mine, and in the preceding half-century large numbers must have gone over to become intermingled with the gravels, where they would remain for good unless some observant miner happened to bring them to light. Specimens thus found, falling into the hands of such collectors as C. D. Voy, would naturally be added to the growing list of Tertiary gravel relics. The flat dish or platter found by Voy in this or a neighbouring mine is identical in type with several of the specimens from the village-site on the brink of the mine. A rough roundish mortar and a small handstone were found by Professor McGee on a ledge thirty feet below the brink of this mine, where they had fallen from above; and at Todds Valley, a few miles further southward, a roundish boulder, some three feet in diameter, having a neatly shaped mortar in one side of it, was found resting on the bed-rock of a deep mine. This specimen also had undoubtedly fallen in from above. An Indian dwelling was situated on the rim of a mine near by, and about it were scattered mortars of all kinds. A brush shelter in which the women grind acorns, a little higher up than the dwelling, contained a fixed mortar with numerous pits and at least a dozen pestles, both flattish and cylindrical in shape.

"These significant relationships of Indian village sites and

gravel diggings were repeated everywhere, and although Whitney observed the presence of the 'Diggers,' he made the mistake of supposing they used only fixed mortars, that is, those worked in the surface of large masses or outcrops of rock. The fact is that portable mortars and grinding-stones of diversified forms are and have been used by Indians in all parts of California. It is not to be supposed that miners would pay much attention to the origin of relics found by them in the mines, since they attached no particular significance to them; so that between the unwary geologist, the unthinking miner, and the professional collector cultivating a prolific field, it is to be expected that many mistakes would be made."¹

Having now briefly sketched the disposition of the contending forces and the respective armaments with which they were equipped, we are in a position to follow Mr. Holmes in his attack on the actual stronghold in which Dr. Wright, Mr. Wilson, and others have so long taken refuge. The most formidable redoubt was the "Calaveras skull" (Plates VII.-VIII.).

The legend of the skull is that it was found by a Mr. Mattison in February, 1866, while working at the bottom of a mine at a depth of 130 feet from the surface. It lay near the bottom of a bed of gravel within a few feet of the rock bed. According to Whitney's statement, Mattison did not at once recognise it to be a skull, being so embedded and incrustated with earthy and stony material, but "thought it to be a piece of the root of a tree." From the mine it was carried to the office of a local merchant, where, upon being partially cleaned by a clerk, it was recognised as a human skull. Subsequently it was sent to Dr. Jones, "an enthusiastic collector of natural history specimens," who, regarding the skull as of great interest, sent it to the State Geological Survey in San Francisco, and thus it fell into the hands of Professor Whitney. In

¹ *Loc. cit.*, p. 445.

PLATE VII

PLATE VII



(FRONT VIEW)



(SIDE VIEW)

THE CALAVERAS' SKULL

cutting away the incrusting material several fragments of bone were found (some of which appeared to belong to a smaller individual than the owner of the skull), bones of a small mammal, a snail shell, a small wampum or shell bead, and some bits of charcoal.

Professor Whitney expresses his views on the history of the skull as follows :—

“The skull was unquestionably dug up somewhere, and had unquestionably been subjected to quite a series of peculiar conditions. In the first place, it had been broken, and broken in such a manner as to indicate great violence, as the fractures go through the thickest and heaviest parts of the skull ; again, the evidence of violent and protracted motion, as seen in the manner in which the various bones are wedged into the hollow and internal parts of the skull, as, for instance, the bones of the foot under the malar bone. The appearance of the skull was something such as would be expected to result from its having been swept, with many other bones, from the place where it was originally deposited down the shallow but violent current of a stream, where it would be exposed to violent blows against the bowlders lying in its bed. During this passage it was smashed, and fragments of the bones occurring with it were thrust into all the cavities where they could lodge. It then came to rest somewhere, in a position where water charged with lime salts had access to it, and on a bed of auriferous gravel. While it lay there the mass on which it rested was cemented to it by the calcareous matter deposited around the skull, and thus the base of hard mixed tufa and pebbles which was attached to it when it was placed in the writer's hands was formed. At this time, too, the snail crept in under the malar bone, and there died. Subsequently to this the whole was enveloped by a deposit of gravel, which did not afterwards become thoroughly consolidated, and which, therefore, was easily removed by the gentlemen who first cleaned up the specimen in question, they only removing the looser gravel which surrounded it.”¹

¹ Quoted from Holmes' paper, p. 458 (Whitney, p. 272).

On the above report Mr. Holmes comments as follows:—

“When it is remembered that the fractures exhibited by the skull are fresh and sharp, this highly imaginative statement loses its force, for the tossing in a torrent over bowlders would not only have bruised and abraded the sharp edges of the bone, but the loose earth, broken bones, wampum, and shells, instead of being packed into the skull, would have been quickly dislodged and widely scattered by the rushing waters. The facts are that the conditions of fracture and the impacting of bones of more than one individual, along with other miscellaneous articles, in the cavities of the skull, are just such consequences as would result from pitching body after body into an Indian burial pit, where young and old were jammed into a conglomerate mass and covered with earth, gravel, and stones.

“The presence of a wampum bead embedded with earth, bones, and pebbles in the skull is a strong argument against antiquity. It is not claimed that this shell bead is fossilised, and it would seem that it resembles in every way—size, shape, manner of boring, and degree of elaboration—the concavo-convex beads made from clam shells and worn by members of nearly every Indian family in California. That a Tertiary people should have made and worn the identical form seems highly improbable.

“The small snail shell, the fragile *Helix mormonum*, found also in the skull, is much more at home in a modern burial place than in the torrent-swept bed of a Tertiary river. The species is recent, and I am not aware that it has been found in Tertiary formations.

“It thus appears that the so-called Calaveras skull exhibits nothing in its character, condition, or associated phenomena incompatible with the theory of recent origin, and very much that may be justly construed as favouring that theory.”¹

Among the numerous stories current about the conditions under which the skull was found, one is to the effect that it was put into the mine by one of Mattison's neighbours, as a joke, while he was at his dinner. For further evidence of this kind see Mr. Holmes' paper.

It seems to be agreed among the controversialists that "nearly all the organic matter in the bones had disappeared and a large portion of the phosphate of lime had been replaced by the carbonate, indicating a fossilised state." But as this is a change which might have occurred under favourable conditions in a few hundred years, it possesses no value as a test of great antiquity.

From Dr. Wyman's report, in Whitney's paper, Mr. Holmes quotes the following :—

"First. That the skull presents no signs of having belonged to an inferior race. In its breadth it agrees with the other crania from California, except those of the Diggers, but surpasses them in the other particulars in which comparisons have been made. This is especially obvious in the greater prominence of the forehead and the capacity of its chamber. Second. In so far as it differs in dimensions from the other crania from California it approaches the Eskimo."¹

In Mr. Holmes' paper much more will be found calculated to deepen the doubts raised about the great antiquity of the so-called Calaveras skull, but to my mind enough has been said to enable, at least some of my readers, to say yea or nay to the following conclusion to which the author had finally come after an inspection of the famous relic itself.

"On returning to the East I took the first opportunity of visiting Cambridge for the purpose of examining the Calaveras skull. Professor Putnam very kindly removed the specimen from its resting-place and permitted me to examine it at leisure and to handle the loose materials—the lime-cemented earth, the bits of bones, and the shell bead—detached by Professor Wyman. I had looked forward with great interest to this glimpse of the specimen about which so much has been said and upon which so much has been and is predicated, and was prepared to be duly impressed with its character as a fossil, but

¹ *Loc. cit.*, p. 458.

I was distinctly disappointed. The importance of the skull as an index of antiquity has been overestimated. I find myself confirmed in the conclusions forced upon me by a consideration of the evidence already presented, namely, that the skull was never carried and broken in a Tertiary torrent, that it never came from the old gravels in the Mattison mine, and that it does not in any way represent a Tertiary race of men. If the existence of Tertiary man in California is finally proved, it will be on evidence other than that furnished by the Calaveras skull."¹

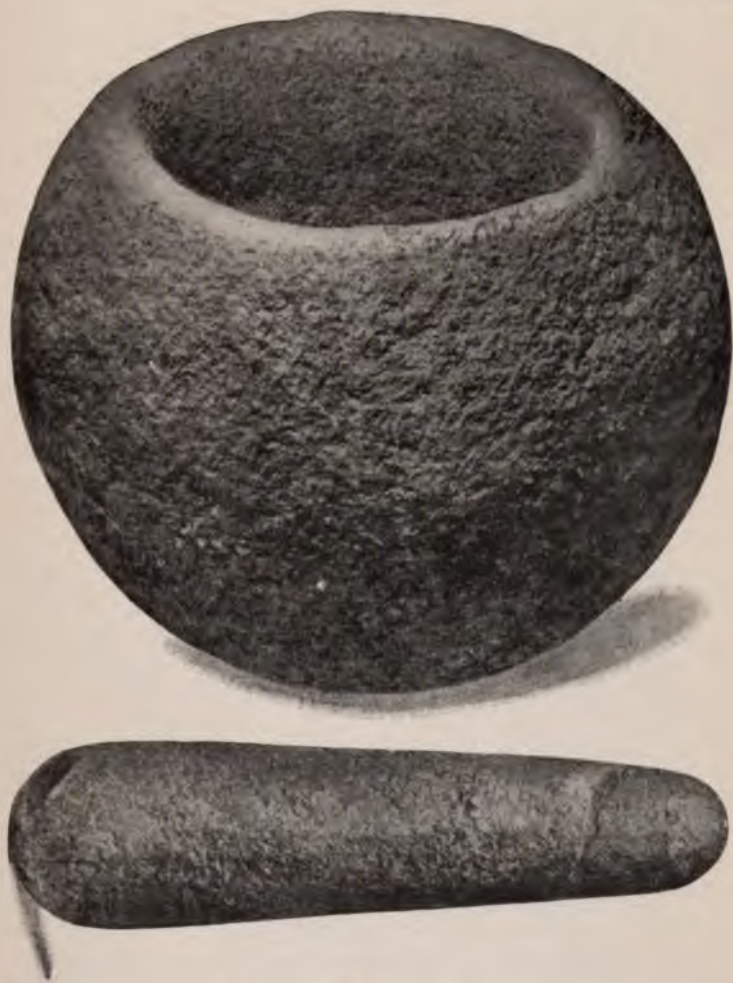
Having now disposed of the direct evidence furnished by the history of the circumstances in which the skull was discovered, we will shortly notice the "recent events" which according to Dr. Wright "have brought such additional evidence in support of this discovery that it would seem unreasonable any longer to refuse to credit the testimony." They are three in number. First, the affidavit of Mr. J. H. Neale, that he had taken a stone mortar and pestle (Plate IX.) together with some spear-heads from undisturbed strata of gravel under the lava of Table Mountain.

As a preliminary remark it may be observed that the Neale finds were made in 1877, ten years before Dr. Becker became aware of the fact and secured a report of the discovery to which affidavit was made. According to Mr. Holmes, the essential paragraphs of this document are as follows:—

"At a distance of between 1,400 and 1,500 feet from the mouth of the tunnel (Montezuma mine), or of between 200 and 300 feet beyond the edge of the solid lava, Mr. Neale saw several spear-heads of some dark rock, and nearly one foot in length. On exploring further, he himself found a small mortar three or four inches in diameter, and of irregular shape. This was discovered within a foot or two of the spear-heads. He then found a large, well-formed pestle, now the property of

¹ *Loc. cit.*, p. 468.

PLATE IX



PESTLE AND MORTAR FROM A MINE UNDER A BED OF LAVA
IN TABLE MOUNTAIN, CALIFORNIA

Dr. R. I. Bromley, and near by a large and very regular mortar, also at present the property of Dr. Bromley. All these relics were found the same afternoon, and were within a few feet of one another and close to the bed-rock, perhaps within one foot of it."¹

On visiting the mine, which was closed and caved in about the mouth with a newly opened tunnel alongside, Mr. Holmes describes its site as surrounded by limited areas, upon which houses could be built or lodges pitched. "All about," he writes, "I found traces of native occupancy, and a dozen mortars, pestles, and pounding stones were picked up. These did not differ in character or material from the corresponding varieties of utensils reported from the deep gravels."

Mr. Holmes' narrative of his interview with Mr. Neale is too important to be curtailed. It is as follows:—

"I took pains to have Mr. Neale tell me the story of the finds in all possible detail. The account as related in the work of Dr. Becker had evidently passed out of his mind in a large degree, as it had also passed out of my own. His statements, written down in my note-book during and immediately following the interview, were to the following effect:—

"One of the miners coming out to lunch at noon brought with him to the superintendent's office a stone mortar and a broken pestle, which he said had been dug up in the deepest part of the tunnel, some 1,500 feet from the mouth of the mine. Mr. Neale advised him on returning to work to look out for other utensils in the same place, and agreeably to his expectations two others were secured—a small ovoid mortar, five or six inches in diameter, and a flattish mortar or dish, seven or eight inches in diameter. These have since been lost to sight. On another occasion a lot of obsidian blades or spear-heads, eleven in number, and averaging ten inches in length, were brought to him by workmen from the mine. They had been found in what Mr. Neale called a 'side channel'; that is, the

¹ *Loc. cit.*, p. 451.

bed of a branch of the main Tertiary stream, about 1,000 feet in from the mouth of the tunnel, and 200 or 300 feet vertically from the surface of the mountain slope. These measurements were given as estimates only, but at the same time they were, he felt sure, not far wrong. Four or five of the specimens he gave to Mr. C. D. Voy, the collector. The others also had been given away, but all trace of them had been lost. Mr. Neale spoke enthusiastically of the size and perfection of these implements, and as he spoke drew outlines of long notched blades in the dust at our feet. Some had one notch, some had two notches, and others were plain leaf-shape blades.

“Desiring to find out more concerning these objects, he went on to say, he showed them to the Indians who chanced to be present, but, strangely enough, they expressed great fear of them, refusing to touch them or even to speak about them; but finally, when asked whether they had any idea whence they came, said they had seen such implements far away in the mountains, but declined to speak of the place further or to undertake to procure others. This statement by Mr. Neale struck me at once as interesting and significant, and I was not surprised when a few days later it was learned that obsidian blades of identical pattern were now and then found with Digger Indian remains in the burial-pits of the region. The inference to be drawn from these facts is that the implements brought to Mr. Neale had been obtained from some one of the burial-places in the vicinity by the miners, who found no spot too sacred to be invaded in the eager search for gold. An additional inference is that the Indians were aware of the origin of the specimens, and were afraid of them because of the mortal dread that every Indian feels of anything connected with the dead. How the eleven large spear-heads got into the mine, or whether they ever came from the mine at all, are queries that I shall not assume to answer, but that they came from the bed of a Tertiary torrent seems highly improbable, for how could a cache of eleven slender, leaf-like implements remain unscattered under these conditions; how could fragile glass blades stand the crushing and grinding of a torrent bed; or how could so large a number of brittle blades remain unbroken under the pick of the miner working in a dark tunnel?

For, as Dr. Becker states, 'The auriferous gravel is hard picking; in large part it requires blasting.'

"That the affidavit of Mr. Neale does not materially strengthen the evidence favoring antiquity I am now fully convinced. In his conversation with me he did not claim to have been in the mine where the finds were made, and a sworn statement vouching for the truth of assertions made by other persons, and these other persons unnamed miners, cannot be of value in establishing a proposition requiring proofs of the very highest order."¹

To the above observations, which seem so reasonable and adequate that no fair-minded person can object to the legitimacy of the conclusion, it is unnecessary for me to add anything.

The second "event" in Dr. Wright's argument is the King pestle (Fig. 31), the discovery of which is thus described by Dr. Becker:—

"In the spring of 1869 Mr. Clarence King visited the portion of the Table Mountain which lies a couple of miles south-east of Tuttletown, and therefore near Rawhide Camp, to search for fossils in the auriferous gravels. At one point, close to the high bluff of basalt capping, a recent wash had swept away all talus and exposed the underlying compact—hard, auriferous gravel-beds, which were beyond all question in place. In examining this exposure for fossils he observed a fractured end of what appeared to be a cylindrical mass of stone. This mass he forced out of its place with considerable difficulty on account of the hardness of the gravel in which it was tightly wedged. It left behind a perfect cast of its shape in the matrix, and proved to be a part of a polished stone implement, no doubt a pestle."²

¹ *Loc. cit.*, p. 452.

² *Bull. Geo. Soc. of America*, 1891, p. 193.

"The unfortunate part," says Mr. Holmes, "about this very noteworthy feature of the testimony is that Mr. King failed to publish it—that he failed to give to the world what could well claim to be the most important observation ever made by a geologist bearing upon the history of the human race, leaving it to come out through the agency of Dr. Becker, twenty-five years later" (*loc. cit.*, p. 454).

This remarkable object is now in the United States National Museum. It is symmetrical in shape, and highly polished from use. Mr. Holmes searched the particular site on which it was found, "in the hope of

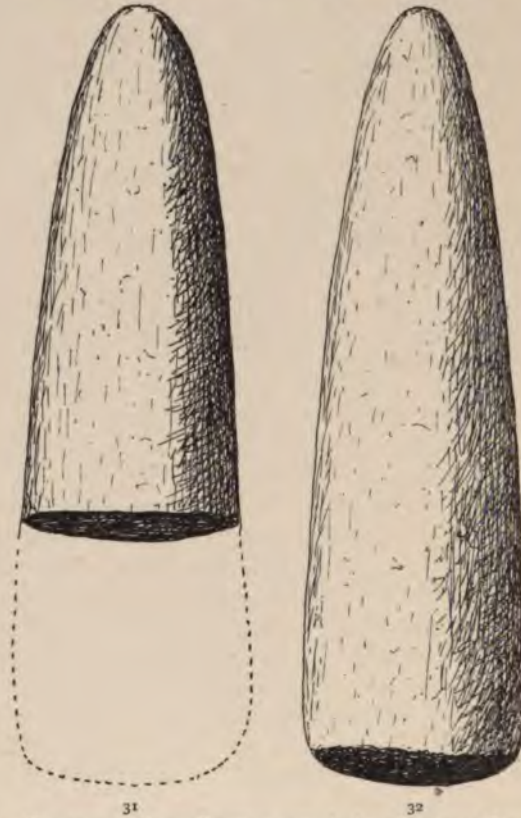


FIG. 31, CLARENCE KING PESTLE AND (32) A MODERN INDIAN ONE

finding some trace of human handiwork, but beyond the usual Digger mealing-stones scattered over the surface nothing was found." So he contents himself by figuring it side by side with a typical pestle of the Californian

tribes of modern times (Figs. 31 and 32). The striking resemblance between the two implements is startling, terribly so when we consider that one is modern and the other, if genuine, the oldest product of man's handicraft that has ever yet been found!

The third "event" which Dr. Wright advances in support of the genuineness of the Calaveras skull is the report of the discovery of a mortar, in 1887, in the Empire mine under circumstances similar to those already described. But we have already enough of this class of evidence, and as the statement is also second-hand, it is unnecessary to make further inquiries into the matter.

Perhaps the best way of arriving at the real merits of this remarkable controversy is to put the matter into a nutshell by simply defining the question at issue and contrasting with it the logical consequences of accepting the evidence as true. The following collateral statements may be accepted as unchallenged:—

(1) The "gravels" belong to the Middle Tertiary period.

(2) The fossil plants and animals represented in them belong to extinct species, except the Calaveras skull, which in point of development appears to be as well formed and capacious as the majority of human skulls of the present age.

(3) Objects showing human workmanship, said to have been found in the gravels, are practically identical with those of the Indian tribes now or formerly inhabiting California (Plate X.).

The real difficulty of the problem may therefore be thus stated. People who profess to believe that the Calaveras skull belonged to a human being who inhabited California when these Tertiary gravels were being deposited, and that the stone implements, weapons, and ornaments, said to have been found in them, are relics of a human civilisa-

tion of that period, are upholding opinions which, if true, would be absolutely subversive, not only of the doctrine of human evolution, but of the principles on which modern archæology has been founded. Writing in 1897 on the Java skull,¹ I made the following remarks:—

“Taking the Java skull at Dubois’ estimate of 1,000 cc., that of an average European at 1,500 cc., and that of a gorilla, from a specimen in the University of Edinburgh, as stated by Sir William Turner, at 590 cc., we observe that *Pithecanthropus erectus* stands about half-way in point of brain capacity between modern man and the gorilla. Now, if the geological horizon of the Java man is correctly ascertained to be the borderland between the Pliocene and Quaternary periods, we can form some idea how far we have to travel backwards to reach that of the common stock from which men and apes have sprung.”

Compare with this the geological horizon assigned by Mr. Holmes to the Californian man.

“The existence of a Tertiary man, even of the lowest grade, has not been yet fully established in any country, and this California evidence, therefore, stands absolutely alone. It implies a human race older by at least one-half than *Pithecanthropus erectus* of Dubois, which may be regarded as an incipient form of human creature only.”²

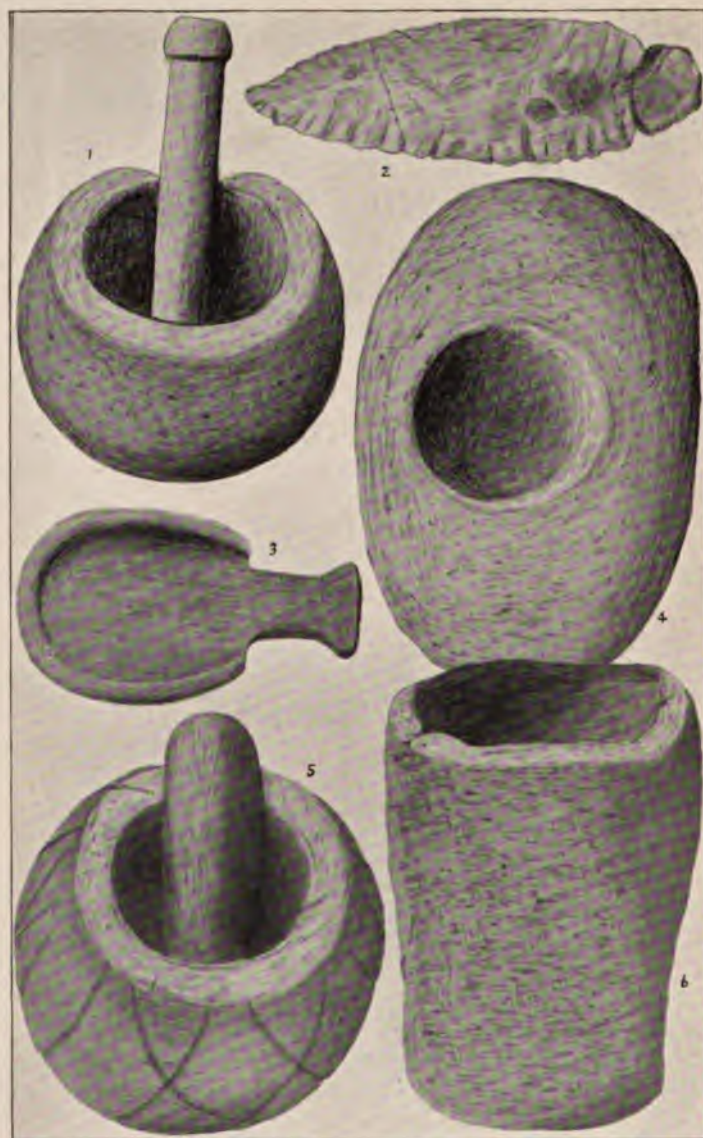
According to these calculations the cranium of a Californian “auriferous gravel man” would have been of so low a type as to be undistinguishable from that of the Simian progenitor of *Homo sapiens*. But instead of that we have in the Calaveras “find” a skull that could have contained the brains of a philosopher of the present day.

Nor is the handicraft skill of the Tertiary prodigy out of joint with the reversal of evolutionary doctrines which its existence implies, for he seems to have started life by using polished stone implements, ornamented mortars and pestles, spear-heads, and other stone and shell objects,

¹ *Prehistoric Problems*, p. 186.

² *Loc. cit.*, p. 470.

PLATE X



MORTARS AND OTHER OBJECTS SAID TO HAVE BEEN FOUND
IN THE AURIFEROUS GRAVELS OF CALIFORNIA

all of which are equally inexplicable and improbable on the hypothesis that they are the productions of human beings of that period. On Plate X. are represented a few characteristic specimens of these questionable remains, copied from photographic illustrations by Mr. Holmes, which I think will be sufficient to convince any unprejudiced inquirer that they must be relegated to the present Indian civilisation of that continent. The following explanatory and descriptive notes on these objects are given on the same authority :—

Fig. 1. Globular mortar, with cylindrical pestle, found in 1861, with other stone relics and the bones of fossil mammals, in auriferous gravels, about 16 feet beneath the surface, at Kincaid Flat, Tuolumne County. Diameter 10 inches. Referred to by Whitney.¹

Fig. 2. Obsidian lance-head, found in 1869, with other relics and with mastodon remains, in auriferous gravels, 10 feet below the surface, at Horse Shoe Bend, Merced River, Mariposa County.²

Fig. 3. Scoop-shaped utensil of diorite, found in 1864, in auriferous gravel, 16 feet below the surface, near Oregon Bar, North Fork American River, Placer County. Similar specimens have been found in California.

Fig. 4. Mortar, said to have been found in 1862, in auriferous gravel, beneath 14 (or 140 feet) of basalt, and 200 feet in from the surface of the slope, near the Boston Tunnel Company's mine, Table Mountain, Tuolumne County. Shape only partially artificial, and not peculiar to any region.

Fig. 5. Mortar, found in 1863, with other stone relics, and associated with mammalian remains, in auriferous gravels, about 16 feet below the surface, in Gold Spring Gulch, Tuolumne County.³ This type of mortar is in use to-day, and the pestle is the usual form in California.

¹ *Auriferous Gravels*, p. 263.

² *Ibid.*, p. 261.

³ *Ibid.*, p. 263.

Fig. 6. Cylindrical mortar, found in 1861, with other relics of stone, in auriferous gravel, about 10 feet beneath the surface, three miles north-east of Shingle Springs, Eldorado County.¹ Type not unusual in Central California.

If these and similarly worked objects be accepted as genuine relics of the so-called auriferous gravel men of California, we must, henceforth, delete from archæological nomenclature such terms as *Palæolithic* and *Neolithic* as having no longer any chronological significance. Let me, however, allow Mr. Holmes to give the final touches to the solution of this strange problem.

"On examining the art remains it is found that they also seem out of place in Tertiary times, that they present a decidedly modern aspect. Of the fifteen or twenty varieties reported from the gravels by Whitney and others, all appear to be of recent types. They are practically identical with the stone implements used by the native tribes of California to-day or in the recent past. If these forms are really of Tertiary origin, we have here one of the greatest marvels yet encountered by science; and perhaps if Professor Whitney had fully appreciated the story of human evolution as it is understood to-day, he would have hesitated to announce the conclusions formulated, notwithstanding the imposing array of testimony with which he was confronted. To suppose that man could have remained unchanged physically, to suppose that he would have remained unchanged mentally, socially, industrially, and æsthetically for a million years, roughly speaking (and all of this is implied by the evidence furnished), seems in the present state of our knowledge hardly less than admitting a miracle."²

To this I will only add that "it is more likely that the evidence is false than that the miracle is true."

Just one final word by way of emphasising the correctness of Mr. Holmes' line of argument and the general conclusions he has arrived at. It has been abundantly

¹ *Ibid.*, p. 265.

² *Loc. cit.*, p. 424.

proved by Huxley and others that the five-toed progenitor of the present-day Equidae lived during the early Tertiary period. Since then there has flourished a whole series of genera and species, now extinct, which link together the former with the latter in a remarkable evolutionary sequence of successive transformations. If on the other hand we accept the Tertiary origin of the Calaveras skull, its original owner, who was a contemporary of this five-toed horse, would appear to have propagated his species during the vast period which has elapsed since then without undergoing any perceptible modification. The law of evolution, though thus proved to have been rigidly at work on the American continent as regards horses and other members of the organic world, would seem not to have affected man in that portion of the globe. When, however, we contrast with this what has taken place in the Old World, we find that, since he came on the scene in Quaternary times (which is not much more than a quarter of the age of the Calaveras man), he has not only undergone some striking bodily changes, especially in his cranial development, but also has passed through a series of progressive systems of civilisation, each characterised by corresponding changes in handicraft products.

CHAPTER IV

THE FORGERY OF ANTIQUITIES IN THE BRITISH ISLES

ONE of the underlying objects of this book is to teach, in some small measure, how to eliminate spurious relics from the general body of materials which is being gradually collected throughout the world, as a permanent and trustworthy record of the history of humanity and the development of civilisation ; or at least to form the constructive basis of such a history. It is by no means uncommon in this country to find objects, which bear inherent evidence of their modernity, offered for sale to collectors and curators of museums as genuine antiquities. As a rule, a cursory glance is sufficient for skilled persons to detect and reject forgeries of this kind ; but, should an individual here and there be taken in, there can be no great harm done, as the falsity of such objects is sure to be sooner or later discovered. There is no necessity, therefore, to make an exhaustive search for every instance of fraud, whether successful or not for the time being, although it might be in many cases amusing to depict the chagrin of a purchaser when he became reluctantly convinced that he was duped. We are here primarily concerned with forgeries which have a tendency to vitiate the sources of knowledge, and thereby to give an erroneous bias to future researches ; such as would have been the case had the Moulin-Quignon jaw and the Calaveras skull been accepted as genuine relics of

Quaternary and Tertiary man respectively. In this eventuality there would be no alternative but to abandon the doctrine of organic evolution which has taken so deep a hold on the scientific mind of the present age. Minor forgeries are, however, of some importance, inasmuch as, when their history is fully traced, they often become the means of divulging the ingenious methods by which frauds are successfully perpetrated on the unwary. It may, therefore, be appropriate to begin this chapter by a brief sketch of the career of a notorious forger of prehistoric antiquities, commonly known under the pseudonym of "Flint Jack." The late Dr. Joseph Stevens, Honorary Curator of the Reading Museum, in his short history of this strange character, published in 1894, thus introduces him to his readers:—

"That truth is stranger than fiction we have frequent verifications. The police reports often reveal passages in the lives of individuals, which, if related in the pages of a novel, would be read with doubt, if not with absolute incredulity. It is now some years since a poor fellow, who described himself as a bricklayer's labourer, was convicted of theft, and imprisoned in Bedford Gaol, where, I believe, he died, most of whose life was passed in deception, but whose history testifies that he possessed ability, and a kind of genius which would have enabled him to obtain a comfortable subsistence, if not a respectable scientific position, had he taken half the pains to be honest that it took him to be dishonest. He was at his best something more than a mere forger, and his life, apart from its moral, is full of interest, from the light it throws on human character. He would have been a good practical geologist probably had he persevered in that line; and it is well known that he made friends among scientific men, who would have pushed him forward; but his love of wandering and adventure mingled with his native duplicity were more than a match for his integrity, and his life became a failure.

"The poor wandering fellow was best known to fossil dealers, curators of museums, and scientific men in the midland

and northern counties by the name of 'Flint Jack'; but he bore several other *aliases*, such as 'Fossil Willy,' 'Old Antiquarian,' 'Cockney Bill,' 'Bones,' and 'Shirtless,' all expressing but too plainly the habits of life of this singular individual, whose real name was Edward Simpson. He was born at Sleights, near Whitby, in Yorkshire, in 1815, but it has been suggested by some who were well acquainted with him, and from his dialect, which led to his being called 'Cockney Bill,' that he was a native of the Metropolis. And in corroboration of this, at a later period of his life, when he was taken into custody at Bedford, he described himself, according to the *Bedford Times*, as 'a bricklayer's labourer from the Borough.' Be this as it may, it is certain that he lived in his earlier days as a respectable servant in the house of Dr. Young, the historian of Whitby; and that afterwards he was for six years in the service of Dr. Ripley, of Whitby, with whom he frequently went fossil-hunting; but on whose death in 1840 he appears to have commenced seeking fossils on his own account, which he disposed of to local geologists and dealers. It was around Whitby that he acquired a good deal of his knowledge of fossils and their localities. Here also he gained some knowledge of flint implements, the fabrication of which rendered him subsequently so dexterous as to succeed in gulling, not merely the public, but learned ones who had spent the whole of their lives in archæological pursuits. . . .

"At the time of our first introduction to Flint Jack at Whitby he was looked on as an intelligent young fellow, and went by the familiar name of 'Fossil Willy.' In 1841 he extended his dealings to Scarborough, Filey, and Bridlington, traversing the various districts on foot, and, in addition to finding fossils, became expert, and was often employed in cleaning and setting up specimens. But nothing up to this time had led to any suspicion as to his honesty. The neighbourhood of Bridlington has long been known as good hunting-ground for *Neolithic* flint implements, and it was here, according to his own statement, that it first entered his head to become a forger. He was shown a flint arrow-head, and asked if he could imitate it. This was the first step in Jack's decline, and led to the gradual abandonment of search for genuine articles, and the substitu-

tion of imitations. He thought he could more easily obtain money by selling forged objects than by hunting over the fields for implements and in the pits for fossils. . . . As the business he had now engaged in required some knowledge of antiquities, Jack availed himself of the opportunities which presented themselves of visiting public and private collections, in order to observe the forms of urns, heads, seals, and other relics, and the materials of which they were constructed, for his ambition, or rather perhaps his greed, had already suggested the fabrication of various curiosities, in addition to flint implements, likely to meet the reception of the public. Thus life went on with greater or less success till about 1844, when he is found assisting collectors in making up their sets of implements. Genuine ones when procurable without much effort; but when such were not forthcoming to meet the demand Jack substituted forgeries. Among his patrons was a Mr. Tindall, who made a purchase of thirty-five implements, in consequence, as he himself stated, of their differing from any of his own discovery. But Mr. Tindall complained that they were very dirty, and he could not clean them in cold water. So he boiled a few of the dirtiest in a saucepan, and on draining off the water he found that several of them had been made up of splinters of flint which Flint Jack had stuck together with boiled alum to render them perfect in appearance."

Henceforth it would appear that the forgery of antiquities became the governing principle of Flint Jack's life; and so he continued to practise his art as a means of livelihood, apparently oblivious of the fact that it involved any moral delinquency. On one occasion, when his goods were characterised as modern, he frankly admitted the charge, but added that they "might be taken for what they were—good imitations of the originals." His earlier and later peregrinations were largely confined to the midland and northern counties of England, but as his practices were gradually found out, he had constantly to seek for fresh hunting-ground. He visited Scotland and Ireland; but his Scottish tour was not a success, the people being,

as he said, "too cannie, and the journey would hardly bear expenses." He was, however, much gratified with his visit to Ireland, where he "left behind him many a fine celt, arrow-head, hammer, and spear."

That the forger did not confine his skill to the manufacture of flint implements we have many examples on record. Thus at Malton he appeared one day wearing a piece of ancient armour which "he professed to have discovered near the encampments at Cawthorne; whereas the truth was that he had fashioned it out of an old tea-tray, which he had picked up on his journey. At first he designed it for a shield, but not being able to manage a boss in the centre, he turned it into a Roman breastplate. This article he disposed of in Malton; and it is now, we believe, in company with an ancient stone hammer, in a collection of antiquities at Scarborough."

Hearing of the discovery of a Roman milestone he resolved to make a similar relic. Having found a suitable stone for this purpose near Bridlington, he succeeded so well that he sold it to a doctor at Scarborough for five pounds for preservation in a museum. At Cambridge, according to his own statement, "he drove a roaring trade" in antiquities. And on his first visit to London during a whole year "he found the demand for *celts* and other flint implements fully up to the measure of his power to manufacture them."

While in the metropolis he became known to Professor Tennant, an eminent lecturer and dealer of fossils in the Strand, who employed him to obtain fossils and rock specimens.

"He had the coolness," writes Dr. Stevens, "to tell the Professor 'that there were plenty of his things in the British Museum—and very good things they were, too.' In fact he gloried in his ability to form counterfeits, and appeared to think his neat deceptions were to be received quite as clever matters

of business. A gentleman who had a valuable collection was shown a specimen by Professor Tennant, which the gentleman thought would make a rare addition to his collection. 'You are sure of its antiquity,' said the Professor. 'I have no doubt of it,' said the collector; and he named the remote period to be assigned to the specimen. 'I am sorry to tell you,' said Mr. Tennant, 'that I saw it made last week.'

At the request of Professor Tennant and some others interested in prehistoric archæology, Jack exhibited his skill as a maker of implements at a meeting of the Geologists' Association, at their rooms in Cavendish Square. The date of this meeting was January 7th, 1862. At the conclusion of a paper "On the Ancient Flint Implements of Yorkshire, and the Modern Fabrication of Similar Specimens," Jack was invited by the president (Professor Tennant) to mount the platform and exhibit his skill. The result is thus described:—

"He undid the knots of his red handkerchief, which proved to be full of fragments of flint. He turned them over and selected a small piece, which he held, sometimes on his knee, sometimes in the palm of his hand, and gave it a few careless blows with what looked like a crooked nail. In a few minutes he had produced a small arrow-head, which he handed to a gentleman near, and went on fabricating another with a facility and rapidity which proved long practice. Soon a crowd had collected round the forger, while his fragments of flint were fast converted into different varieties of arrow-heads, and exchanged for sixpences among the audience."

Through the kindness of the Director and Curator of the Royal Scottish Museum, Edinburgh, I am enabled (Plate XI.) to place before my readers photographic illustrations of selected specimens from a small collection of Flint Jack's forgeries exhibited in the Museum. The iron crook shown is one of the tools he used in chipping the flints.

As time went on Flint Jack's occupation became less

remunerative, probably from his notoriety having become widely known, but still more from his habits of hard drinking. He himself regarded this vice as the chief cause of his misfortunes, as, in referring to the year 1846, he is reported to have said :—

“ In that year I took to drinking, the worst job yet. Before that I mostly had five pounds in my pocket, but since then I have often been in misery and want.”

The first appearance of Flint Jack in Salisbury was in 1863, but his success in selling implements, though stated (falsely, of course) to have been found at Stonehenge, was not great. During his stay here the late Mr. Edward J. Stevens, Hon. Curator of the Blackmore Museum, employed him to make a representative series of implements which may still be seen in that Museum. They are in a case, along with a number of other home and foreign forgeries, and consist of stone axes (some perforated), flakes and arrow-points of flint, a sling-stone, a saw, etc. In describing these forgeries, Mr. Stevens makes the following observations :—¹

“ Many ‘amateur’ forgers can make equally good, if not better, flint hatchets, arrow-heads, and scrapers than Flint Jack and his professional brethren. There were heroes before Agamemnon, and forgers of flint implements before Flint Jack. About the year 1855 ‘there was a manufactory of stone hammer-heads, ancient British urns, and flint weapons of all descriptions on the eastern coast of Yorkshire, principally carried on by one William Smith, *alias* Skin and Grief, or Snake Willy. Not only arrow-heads and celts of all sizes, but rings, knives, saws, and even fish-hooks of flint were produced, some of which have been engraved as genuine in local archæological publications. Since then the manufacture has spread southwards, and many are made in Suffolk. They have also been produced in Kent, and recently the most accomplished of

¹ *Catalogue*, p. 158.

the forgers, Edward Simpson, *alias* Flint Jack, has made more than one public exhibition of his skill in flint-working in London.'"

With the following remarks from the pen of Sir John Evans,¹ our brief notice of Flint Jack may be fittingly brought to a close:—

"Some well-made examples of abnormally large arrow-heads, to which a polished surface has been given by grinding with sand, have been fabricated in Ireland. The works of the notorious Edward Simpson, or Flint Jack, are coarser and less deceptive. When from their abundance his forgeries lost their sale, he earned a somewhat more honest penny by publicly exhibiting his process of manufacture. After I had communicated to the Congress of Prehistoric Archæology, held at Norwich in 1868, a paper on the manufacture of stone implements in early times, I was honoured by a visit from Flint Jack, who was anxious to see some of my work, as 'he believed that I was likely to attain to an equal degree of eminence with himself.'"

With regard to forgeries in general, Dr. Stevens makes the following excellent observations:—

"Collectors should be on their guard in purchasing specimens, as members of the fraternity to which Flint Jack belonged are not rare at the present day (1894). A few forgeries may be seen in the Reading Museum, placed there as a warning, and not for imitation; and with the object of demonstrating the possibility of shaping implements by means of another stone. The Museum further contains some well-wrought arrow-heads, awls, and bodkins in bone, from Wellingford, which the maker attempted to pass off as genuine.

"The fabrication of flint implements for sale appears at the present moment to be largely carried on around London, the imitations extending to implements of both the *Palæolithic* and *Neolithic* series. In a work recently published on stone implements, entitled *Man, the Primeval Savage*, by Mr. Worth-

¹ *Loc. cit.*, p. 15.

ington G. Smith, a short chapter is devoted to forgeries. These forgeries are largely manufactured, particularly at Stoke Newington, and are described as good imitations, and capable of deceiving experienced judges. They are sold by the men who work in the gravel-cuttings, but are made by mechanics expert in the use of the hammer, such as carpenters and plasterers, and sold to the men for small sums. They are then disposed of as genuine, and recently discovered, to visitors who have evidently money at their command, but who are quite ignorant of the character of these productions. It is, however, congratulatory to the genuine investigator that some of these overhasty curio-hunters have been bitten to the amount often of sovereigns for single implements, and in one instance to even five pounds for an unusually fine specimen."

"The Stoke Newington forgers found out that their imitations lacked the colour, polish, and general softness of feature, and the natural abrasions present on ancient specimens, the result of time, chemical changes, and friction against other stones while drifting. These imperfections they set about remedying by resorting to various cunning devices, such as brushing their forgeries over with hard brushes, shaking them up in sacks with other stones and sand, and lastly, to give the definite surface stain, boiling them in saucepans with old rusty nails, fragments of iron, etc. But some observing purchasers detected these devices, and found that reboiling removed the ochreous colour of the surface, leaving the implements grey. But the forger, not to be outdone, resorted to longer boiling, having found that the greater length of time the tools were boiled the more permanent became the ochreous stain. In the case of polished *Neolithic* implements the grindstone is resorted to, but here the microscope reveals that the coarse, straight friction lines are not the result of long-continued hand-polishing."¹

But, as already observed, such isolated stone and flint forgeries, however closely they may imitate genuine specimens, have little effect in modifying our knowledge of the early civilisations to which they may be supposed to

¹ *Op. cit.*, p. 17.

belong ; for no modern forger has ever yet acquired anything like the skill and efficiency in workmanship displayed in the productions of the real prehistoric stone-workers. Those of the former are always clumsy imitations, and seldom remain undetected when brought under the purview of an experienced person. The finding of false palæoliths in certain localities, if accepted as genuine, might possibly be the means of raising a controversy regarding conclusions previously arrived at, such as the geographical distribution of the people who used Palæolithic flint implements. For instance, the discovery of such implements in the Pleistocene gravels of Scotland, or Scandinavia, would considerably alter our present notions of man's relation to the Glacial period ; but no archæologist would accept such a statement without satisfying himself as to its *bona fides*. Nor would a single discovery be enough ; for there are many ways in which forgers may succeed in bewildering for a time the most experienced archæologist. Objects representing a class of known antiquities, and said to be dug up in some specified locality, may appear in such numbers as to lead to the presumption that they are genuine. As an illustration of this category the following recorded by Sir John Evans may be cited :—

“Some thirty years ago ¹ an action was brought by a London dealer in antiquities against the *Athenæum* newspaper for libel in asserting that a series of objects in his possession were forged. The dealer, like many others, had probably been taken in. He had purchased for a considerable sum a large collection of objects in lead or pewter, which were said to have been found during the formation of a new dock at Shadwell. Many of them were supposed to be what are known as pilgrims' signs, and all were said, on no mean authority, to be evidently connected with some religious proceedings, though it was admitted

¹ *Loc. cit.*, p. 12.

there was considerable inconsistency between many of the articles, which, however, was to be accounted for by their belonging to different ages.

"There were crowned monarchs in ecclesiastical vestments, knights in various kinds of armour, archbishops, bishops, and priests with mitres, croziers, and different emblems, incense-cups, patens, ewers, reliquaries, and vessels of all shapes, besides numerous medallions, and plaques with loops for suspension. The great variety of form and the strangeness of some of the devices seemed to raise a presumption that such a fertility of imagination and such dexterity of workmanship could hardly be possessed by any single forger, and therefore that, though exceptional, these objects were to be accepted as genuine.

"Unfortunately for such a view, the late Mr. Charles Reed succeeded in discovering the place of the manufacture, and even exhibited to the Society of Antiquaries some of the moulds in which the relics were cast. By way of a test, inquiry was made of the vendor of the antiques whether he had come across a figure like a drawing that was produced. The answer was 'No; but I think that I have seen something like it in the hands of one of my mates. Can you lend me the drawing?' The sketch was lent, and within a few days the vendor reappeared triumphant, and bringing with him an ecclesiastical figure in metal, with an inscription in Gothic letters on the base—

SANCTUS FABRICATUS

"The fact is that the whole fraud was perpetrated by a couple of illiterate mud-rakers, who prepared their moulds in plaster of Paris, cast their pseudo-antiques in a mixture of lead and pewter, immersed them for some time in a bath of nitric acid, and finally, having daubed them with a coating of river mud, offered them for sale to inquiring antiquaries."

In 1869, at a meeting of the British Archæological Association, Mr. H. Syer Cuming read an instructive

paper on the forgery of antiquities, of which he laid specimens on the table.

"In commencing these few remarks on forgeries," writes Mr. Cuming, "I must beg to warn the lovers of antiques that the various objects of zinc which made their début in 1866 continue to be manufactured, and are still offered for sale wherever new ground is broken. Be it remembered they are of vastly superior fabric to any of the worthless rubbish of lead and cock-metal turned out by Messrs. 'Billy and Charley,' of Rosemary Lane, Tower Hill, and are well calculated to deceive the unsuspicious, especially the square bells of Indian type, first seen in the market towards the close of the year 1867, and of which Mr. J. W. Barly has secured some characteristic examples. Whoever the forger and his accomplices may be, he and they may rest assured that they will not for ever elude detection, and I say this in the hope, and almost with the certainty, that these words will be read and pondered over by the chief culprit in the fraud."

He then exhibited seven pseudo-antique medallions of cock-metal, "the work of the notorious scamps 'Billy and Charley,'" which he showed to be "copies (with a difference) from Byzantine coins of the seventh and tenth centuries," and which had the following history:—

"These seven medallions (with one other) were brought late at night to the shop of a dealer in odds and ends, by a man with a white apron rolled up round him, and having the appearance of a mechanic, who stated that he became possessed of them about three years since, and knew them to be very rare and valuable. The dealer thought them very curious, and after much haggling about price, became a purchaser, in the full belief, as he said, that he had acquired 'a little fortune.' One of these eight medallions he sold next day, but for what sum I could not ascertain; and soon afterwards he was informed that he had been taken in."

Mr. Cuming's next specimens were also by the same forgers, viz. three ectypes in lead of late mediæval

spoons, professed to have been exhumed in the construction of the Charing Cross Railway Station, Strand.

"Such tricks," he writes, "as the foregoing unfold to us a system of chicanery deserving heavy punishment; but still worse frauds are practised by the firm in Rosemary Lane. Ancient stone, bone, and terra-cotta materials are re-wrought in strange forms by Messrs. 'Billy and Charley.' Fragments of Samian vessels are made to assume the contour of beads, spindle-whorls, stars and crescents, and of fish and flowers such as seldom swim in the water or blossom on the earth. Among other of the doings of these impostors is the incising of figures and carving of legends on genuine Roman *tegulae*, thus converting ordinary objects into things which command prices commensurate with their apparent rarity. Those who desire to inspect an example of their craft may gratify their wish by a visit to the Guildhall Museum, where they may see a so-called real antique Roman brick, and read thereon, in clear and well-cut letters nearly seven-eighths of an inch in height, VNDINIC, which we may presume is intended to pass for *Lundini civitas*, the notion being derived from the epigraph, PRBLON, stamped on some of the *tegulae* exhumed in the metropolis."

After some further illustrations of the ingenuity displayed by forgers, he concludes his remarks as follows:—

"In concluding these remarks, I may be permitted to state that the opinion I pronounced respecting the pretended 'find' of lithic remains and an earthen urn at Blackheath, as detailed in this Journal (xiv. p. 94), has lately received an unexpected confirmation. The person who purchased the pseudo-antiques in 1857 has by chance met with a portrait of 'Flint Jack,' and at once recognised it as the likeness of his old deceiver, who was no other than the Yorkshire forger, who twelve years back seems to have been trying his luck in Surrey. I exhibit a sample of the Blackheath 'find,' and other arrow-blades, etc., wrought in black and grey flint, by the aforesaid *chevalier d'industrie*, whose ingenuity, it is to be regretted, was in so many instances rewarded by only too great a measure of success."

THE FORGERY OF ANTIQUITIES IN IRELAND

Two years ago, when visiting the Giant's Causeway, in Ireland, I saw, among the nick-nacks exposed for sale, a number of objects in the form of flint spear- and arrow-points, stone axes, etc., all of which showed a marvellous appearance of age, especially the flints, which had a greyish patina. The vendor, a comely girl, informed me that the antiquarian objects were found in the neighbourhood, but, very prudently, could not say what might be their age. While chatting with a fellow-visitor who was bargaining for a fine arrow-head with serrated edges, the price of which had been finally reduced to one shilling, an experienced Irish antiquary, one of our party, thinking I was about to become a purchaser, whispered in my ear, "Don't buy any, they are all modern." This last autumn some of my Irish archæological friends informed me that the industry of manufacturing stone implements still goes on merrily along the Antrim coast. The latest dodge to dispose of these spurious objects is to bury them in localities known to yield genuine antiquities. Here tourists and tyro archæologists are unsuspectingly led to make excavations, of course under the guidance of some knowing one, and when any of these twentieth-century objects turn up in the shape of spear-heads, arrow-points, or axe-hammers, etc., they are unhesitatingly accepted as genuine products of bygone ages. Mr. Thomas Plunket, of Enniskillen, member of the Royal Irish Academy and of the Royal Society of Antiquaries of Ireland, sends me the following story, which shows what serious results may hang on a single incident of imposition. In this case, had the fraud not been detected, no one could well deny that the yew relic here referred to furnished some precise evidence of the rate at which peat grew :—

"I am in the habit," writes Mr. Plunket, "of purchasing any antiquities that come within my reach, and sometimes I purchase objects that are worthless with the view of securing

whatever antiquarian finds may be unearthed in my own or neighbouring counties. Some years ago a man brought me what appeared to be a branch of an ancient bog yew tree, the two ends of which were originally cut or dressed with a knife, having a crook at each end formed by two minor branches projecting from the main branch—an object which could be utilised for suspending articles on one of the crooks while the other was fixed to a wall. The man told me he found it while digging turf at a depth of twelve feet from the surface, and its appearance bore testimony to the fact that it had lain long in peat. As I put little value on the object I was reluctant to buy it, and so told him that Mr. George Stewart, manager of the Provincial Bank, who was also a keen collector of antiquities, would likely buy it from him. As he was leaving I told him the crook was not so old as the depth he found it would indicate. Before applying to Mr. Stewart he repaired to a little 'eating-house' and, with a sharp-pointed knife, cut or incised rudely the following figures, 1321, and filled or rubbed into the fresh cuts liquid peat or soot. Mr. Stewart at once bought the object thus manipulated. Let me here mention that about six months previous to the above incident I had published in the *Irish Archæological Journal* an article on the growth of a deposit of peat that slowly accumulated over a cairn at Toppet Mountain. When Mr. Stewart secured the crook he showed it to the Rev. Dr. Hughes, a mutual friend of us both, and in due course the latter paid me a visit to inform me that Mr. Stewart had evidence which quite upset my article as to the slow growth of peat. A few days after I called and had an interview with Mr. Stewart regarding the matter, when he at once produced the stick with the two crooks and handed it to me for inspection. When my eye fell on the figures I could not suppress a smile, and Mr. Stewart, seeing the expression on my face, asked if I had seen this find before he had bought it. 'Yes,' said I, 'but there was no date on it when I saw it.' Although Mr. Stewart was a Fellow of the Archæological Society, he did not detect this forgery."

In my *Lake Dwellings of Europe*¹ I have described and

¹ pp. 360-2.

illustrated two stone amulets and a number of inscribed bone pins, reported to have been found on the crannog of Ballinderry, County Meath, which I then regarded as forgeries, basing my opinion on their technique and peculiarities of workmanship; and since then this opinion has been rather strengthened than otherwise.

The following notes on forgeries in the north of Ireland were kindly communicated to me by that well-known veteran antiquary, Mr. W. J. Knowles, of Ballymena, with regard to which he writes as follows (12th May, 1903):—

“The first is copied from a paper on Irish Beads and Amulets which I read to the Royal Historical and Archæological Association of Ireland in 1880. The second is the case I told you when you called here. The third item is one which I mentioned in the correspondence portion of the *Ulster Journal of Archæology*, now being published.¹ I do not just now remember any more jokes, but, of course, there is any amount of information about forging and retouching of genuine articles, so as to improve their appearance and help their sale.”

“1. Before leaving the subject of stone ornaments, I may mention that a few years ago a larger number of stone beads than we usually meet with was thrown on the market, if I may so express it. A certain dealer not finding a sufficient supply for his customers among the farmers and labourers, took to manufacturing them, and I have been told that he would sit up all night manufacturing these, and also bronze objects, clay urns, and war clubs, so as to supply pressing orders. From this energetic manufacturer the forged beads passed into the hands of other dealers, who, in their anxiety to get rid of them, would place a considerable number of the forgeries and a few good and tempting objects in one lot which could not be broken. All or none must be taken. The spurious beads were made chiefly of the bole and lithomarge now turned out plentifully wherever iron ore is mined in county Antrim; but they were so rudely made that no one of any judgment could be imposed

¹ Vol. ix.

on by them. When a dealer got a lot of these no amount of reasoning would make him believe, or I should rather say *admit*, that they were forgeries. His answer would always be, 'Nobody could make these things nowadays.' In order to convince one of these men, I procured a piece of lithomarge, which I may say is quite soft, easily cut with a knife, and takes a fine polish by merely rubbing it, and from this I formed a very neat bead, which I ornamented with concentric rings, put on a little clay here and there, and stuck a little piece of cobweb in the hole to show that it had lain in the house for a long time, and then took it to my friend the dealer, saying, with a long face, that I was afraid it was a forgery. Not at all, he asserted; it was perfectly genuine. Did I not see this and that mark of 'anteekwity' about it, and gave it as his most decided opinion that no man could make such an object in the present day. After I had him fairly committed I confessed the trick, and he declared he would never believe that half the things he met with were genuine after that. He then asked me if I would just lend it to him that he might show it to others to see if they would be deceived as well as himself, to which I consented—made him a present of it, in fact—hoping that I was now in a fair way of stopping the forging business. Thinking no more of the matter, I was shortly afterwards on a visit to my friend Canon Grainger, who pulled out his latest purchases to let me see them, when, to my astonishment, there was conspicuous among the lot my lithomarge forgery. I asked him how he had got it, and he informed me he had purchased it, having no suspicion that it was spurious. I afterwards asked from the dealer an explanation of his conduct, but his answer was: 'I did not sell it to him; I sold him the lot, and gave him the forgery into the bargain.'¹

"2. Tom McClean, who makes all the rude arrow- and spear-heads that are offered for sale to tourists at the Giant's Causeway, once told me how he occasionally got a few genuine arrow-heads. The objects manufactured by Tom are often very large, especially those he carries about with him in his pockets. When he goes into a house to inquire about elf stones and

¹ From *Journal Roy. Hist. and Arch. Assoc. Ireland*, vol. v. fourth series, p. 526.

other antiquities, he will probably be shown a few arrow-heads by the good wife of the house, which he puts on his hand along with some of his own manufacture. When she sees that he is only fooling and not going to buy, she tells him to give her her arrow-heads and be gone about his business. He then holds out his hand with his own big forgeries mixed up with her smaller genuine articles, and says, 'There, dear, just take your pick, for I cannot tell which is yours or which is mine. And,' he added, 'she always takes the big ones.'

"3. Tom also manufactures burial urns, but he only sundries them. Once he had a nicely ornamented specimen, which he sold to a gentleman who took a fancy to it, but having little knowledge of antiquities he had no idea that it was a forgery. Thinking it smelt rather strongly of peat smoke, he put it in a basin of water to steep overnight, but in the morning the urn had disappeared, and there remained in its stead a quantity of shapeless clay."

FALSE ANTIQUITIES IN SCOTLAND

There is a compartment of one of the wall-cases in the National Museum of Antiquities, in Edinburgh, devoted to the exhibition of some patent forgeries, which for one cause or another have found here a resting-place, among which the following may be noted: A Roman lamp, a bronze palstave with a side loop, a small dish with side handles, seven metal daggers, a stone axe, two small urns, a human figure in lead 6½ inches in height, four medals of lead and one of brass, five Roman coins, a copper plate, inscribed "*Robertus Scotorum Rex.*," said to have been found at Dunfermline; another Latin inscription is on a small marble slab said to have been found in 1811, when demolishing the old church at Falkirk.—"FUNERATVS HIC DEZN ROB. GRAHAM ILLE EVERSVS VALL. SEVERVS A.C. Di5 FERGVSIOVS IL. R. SCO." On the other side there is also an inscription—"FALKIRK M^c NAST FVN; MAL^c IIL. 1057."

That lucrative motives generally underlie archæological

forgeries will be readily conceded ; but in some remarkable instances there can be no question that the *vis à tergo* has no meaner object than to raise a laugh at the expense of the investigators. A typical case of this kind occurred in my own experience while excavating an ancient "kitchen midden" at Elie, on the Fifeshire coast. It is needless to give the details of the incident,¹ but the following report of it appeared in the local paper :—

"It is rumoured that some would-be wits 'planted' a piece of rude stone carving which had once been seen about the Ferry, along with a rusty chisel, hoping for a laugh at the antiquary's expense ; but the joke did not come off, as the searchers at once recognised the fraud."

Were I to deny to these "would-be wits" (for they are all known) a place among the category of gentlemen they would be very indignant.

One of the most dangerous, or rather successful, methods of misleading archæologists is when novel relics, *outré* in character and appearance, are represented as associated with others the antiquity of which cannot be a matter of doubt. To this category must be assigned the extraordinary objects recently found on the so-called crannogs of Dumbuck and Langbank, in the estuary of the Clyde, as well as those previously recorded as emanating from the hill-fort of Dunbuie, in the same neighbourhood. The controversy raised over these discoveries brings into prominence problems of the highest importance to British archæologists. It is no longer a question of a few doubtful objects, but of a new civilisation of which hitherto not a trace has been found within the British Isles. The relics from these stations can be readily divided into two groups, each group presenting totally different characteristics. Their most astounding

¹ See *Proc. S. A. Scot.*, vol. xxxv. p. 291.

feature is that, while one group in each station is quite in harmony with the antiquities generally found in analogous situations throughout the Scottish archæological area, the other three groups have such a family likeness that any tyro would at once classify them as products of the same civilisation. These latter consist of objects of slate and shale in the form of spear-heads, pendants, perforated discs, etc., variously ornamented with incised linear patterns, dots, and circles; rough splintery fragments of sandstone with symmetrically arranged small depressions and concentric circles, reminding one of the cup-and-ring markings on boulders and rock-surfaces; portions of bones marked with straight and slanting lines in such a manner as to suggest some kind of cryptic writing like ogams; grotesque images of shale in human form, and a face cut on the inside of a limpet shell; oyster shells (some beach-worn and others fresh-looking) ornamented with sharply-cut scratches, etc.

The opinions and theories formulated by the numerous writers who have endeavoured to throw light on these remarkable discoveries may be classified under three heads.

(1) That the *tout ensemble* of the relics and structures from all these localities represent a people and civilisation of the Stone Age.

(2) That the spear-heads of slate and shale, ornamented or otherwise, are not weapons, but "sacred things," indicating, like the ornamented stones, idols, amulets, etc., a survival of an ancient religious cult. From this point of view it is argued that the structural habitations may not necessarily date back to the earlier periods of Scottish civilisation.

(3) That the strange objects are not genuine relics of the people who constructed and inhabited these habitations, but modern fabrications which, by some mysterious

and unknown means, have become associated with the genuine remains.

As the mystery which lies at the bottom of this controversy has not yet been completely fathomed, it is necessary on archæological grounds to examine the alleged facts and inferences founded on them with the greatest care. The heat generated in its earlier stages having now greatly evaporated, both the public and the disputants are in a better position to estimate the nature and importance of the questions at issue. Indeed, the whole subject, in its successive developments and incidents, may be regarded as a valuable object-lesson in the study of comparative archæology. This is the *raison d'être* of recalling some of the phases of the discussion and bringing them together in this volume—a work which could not have been undertaken until some authoritative details of the excavations were available. I shall therefore, in the first place, give a brief description of the results of the excavations conducted at the hill-fort of Dunbuie and the so-called crannogs of Dumbuck and Langbank, independent of the controversial elements, reserving these for a special chapter.

I. THE HILL-FORT OF DUNBUIE AND ITS REMARKABLE REMAINS

The late Mr. Adam Millar, F.S.A. SCOT., has recorded the result of the excavations conducted on the site of the hill-fort of Dunbuie, situated about a mile and a half to the east of Dumbarton Castle, and three miles to the west of the Roman wall, in an interesting paper to the Society of Antiquaries of Scotland.¹ There is no peculiarity about the position or structure of this fort which differentiates it from many other forts in North Britain. Before excavation there were few indications

¹ See *Proc. S. A. Scot.*, vol. xxx. pp. 291-308.

that structural remains lay beneath the débris, but when this was accomplished there were exposed to view the foundations of a circular wall, $13\frac{1}{2}$ feet thick, enclosing a space 30 to 32 feet in diameter. Through this wall there was one entrance passage on a level with its base, 3 feet 2 inches in width, protected by two guard chambers, one on each side, analogous to those so frequently met with in the Brochs. The height of the remaining part of the wall varied from 18 inches to 3 feet 6 inches. The interior contained no dividing walls nor any indications of secondary occupation.

"The fort," writes Mr. Millar, "has been examined very thoroughly by picking out the stones in the interior one by one, and riddling the fine soil and small stones. The same treatment has been applied to the refuse heap which was found on the outside, and the result of the search is a very remarkable collection of weapons, implements, ornaments, and figured stones." There is no description of the precise position of any of these relics in the ruins, with the exception of two upper stones of querns and a limpet shell having on its inner surface the representation of a human face, which are stated to have been found in the interior of the fort. No objects of metal or fragments of pottery were discovered in course of the excavations, and of bone there were only two small pointed objects and an awl having a perforation at one end. The majority of the following worked objects of stone, bone, and shell are so remarkable and archaic in character that their presence in a fort, which cannot be placed earlier than the Broch period, and probably long after the departure of the Romans from North Britain, has led some archæologists to question their genuineness as relics of any phase of Scottish civilisation.

Objects of Stone.—Nine spear-heads (Plate XIII.), like arrow-points, of slate, six of which have linear patterns

scratched on them. Some are perforated with round holes, and all were made by grinding and polishing. One object of slate, shaped like a knife, was made by chipping. "This knife," says Mr. Millar, "has a feature common to all these slate weapons—they seem to have been saturated with oil or fat, as water does not adhere to them, but runs off as from a greasy surface." Another highly ornamental piece of cannel coal is in the form of a short spear-head with a thickish stem (Plate XIII., No. 6). The stem is adorned with a series of hollows and ridges running across it; one surface has a diamond-shaped pattern, and the other radiating lines running from the stem to the margin. Another group of these remarkable objects shows markings of the cup-and-ring order, circles, linear incisions, and perforations (Plate XVI.). Some of these ornamentations are deeply cut on the naturally rough surfaces of flat pieces of sandstone, while others are on smooth stones artificially prepared for the purpose. A small piece of flint was supposed to have been inserted into a partially burnt handle. There are several examples of hammer-stones of the ordinary crannog type, rubbing-stones, whetstones, as well as a large number of water-worn stones which might have been used as hand-missiles or sling-stones. These latter were not native to the hill, and must have been transported from burns in the neighbourhood. There are also two upper quern stones.

Miscellaneous Objects.—A number of splintered pieces of bone, without showing any other evidence of workmanship, have linear incisions, like those on some of the stones, which suggest some kind of cryptic writing like ogams. There are also a few water-worn shells, like those seen on a sandy beach, having round holes bored through them and sharply-cut scratches on their pearly inner surface. But on the whole the edible molluscs are

but feebly represented, as only five oyster, one cockle, three limpet, and two mussel shells were found, nearly all of which bore marks of some kind of ornamentation. But perhaps the most grotesque object in the whole collection is the limpet shell (Fig. 54) with a human face sculptured on its inner surface.

"The eyes," writes Mr. Millar, "are represented by two holes, the nose by sharply cut lines, and the mouth by a well-drawn waved line, the curves which we call Cupid's bow being faithfully followed. There is nothing at all of an archaic character, however, in this example of shell-carving. We found it in the interior of the fort; it was one of the early finds—nothing like it has been found since; at the same time we have no reason for assuming that this shell was placed in the fort on purpose that we might find it. The fact that it was taken out of the fort is all that we say about it."

Mr. Millar's opinion of these novel handicraft remains was that they were the products of a pre-Celtic civilisation. "The articles found," he writes, "are strongly indicative of a much earlier period than post-Roman; they point to an occupation of a tribe in their Stone Age."

II. THE DUMBUCK "CRANNOG"

The so-called Dumbuck "crannog," that being the most convenient name under which to describe the submarine wooden structures lately discovered by Mr. W. A. Donnelly in the estuary of the Clyde, lies about a mile to the east of the rock of Dumbarton, and about 250 yards within high-water mark. At every tide its site is covered with water to a depth of three to eight feet, but at low tide it is left high and dry for a few hours, so that it was only during these tidal intervals that the excavations could be conducted.

On the occasion of my first visit to Dumbuck, before excavations were begun, Mr. Donnelly and I counted

twenty-seven piles of oak, some 5 or 8 inches in diameter, cropping up for a few inches through the mud, in the form of a circle 56 feet in diameter. The area thus enclosed was occupied with the trunks of small trees laid horizontally close to each other and directed towards the centre, and so superficial that portions of them were exposed above the surrounding mud, but all hollows and interstices were levelled up with sand or mud. The tops of the piles which projected above the surface of the log-pavement were considerably worn by the continuous action of the muddy waters during the ebb and flow of the tides, a fact which suggested the following remarkable hypothesis: "Their tops are shaped in an oval, conical form, meant to make a joint in a socket to erect the superstructure on." These words are quoted from a "Report of a Conjoint Visit of the Geological and Philosophical Societies to the Dumbuck Crannog, 8th April, 1899."¹

The result of the excavations, so far as I can gather from observations made during my second visit to the "crannog," and the descriptions and plans published by various societies, may be briefly stated as follows (see plan, page 143).

The log-pavement within the circle of piles was the upper of three similar layers of timbers placed one above the other, the middle layer having its beams lying transversely to that immediately above and below it. One of the piles (about 4 feet long), when freshly drawn up, clearly showed that it had been pointed by a sharp metal implement, the cutting marks being like those produced by an ordinary axe. The central portion (about 6 feet in diameter) had no woodwork, and the circular cavity thus formed, when cleared of fallen stones,

¹ See *Proceedings of the Philosophical Society of Glasgow*, xxx, 268, and Fig. 4.

showed indications of having been walled with stones and clay. Surrounding this walled cavity—the so-called “well” of the explorers—there was a kind of coping, in the form of five or six “raised mounds,” arranged “rosette fashion,” in regard to which Mr. Donnelly thus writes :—

“One feature that strikes me very much in the configuration of the structure in the centre is those places marked X, Fig. 20, around which I have discovered the presence of soft wood piles 5 inches in diameter driven into the ground, and bounding the raised stone arrangement; the stones in these rude circular pavements or cairns are laid slightly slanting inwards.”¹

From this description, and especially the “slanting inwards” of these “circular pavements” or “cairns,” it would appear that they formed the bases for wooden stays to support a great central pole, a suggestion which, on different grounds, has already been made by Dr. David Murray. In pointing out that a corporation cairn once stood close to the site of the Dumbuck “crannog,” if not actually on it, Dr. Murray writes :—

“Beacons have often a pole in the middle rising above the stonework and surmounted by a cross. Such a pole carried down to the bottom would probably be sunk in the clay, which would produce a hole or well-like cavity similar to that in the formation of the Dumbuck structure.”²

The surrounding piles were also attached to the horizontal logs by various ingenious contrivances, such as a fork, a natural bend, an artificial check, or a mortised hole; and some of the beams were pinned together by tree-nails, the perforations of which were unmistakable. This binding together of the wooden structures is a well-known feature in crannogs, as was demonstrated by my investigations at Lochlee and elsewhere.³ It would be

¹ *Journal of the British Archaeological Association*, December, 1898.

² *Glasgow Herald*, March 22nd, 1899.

³ *Prehistoric Scotland*, p. 431.

still more necessary in a substratum of timbers that was intended (as will be afterwards explained) to bear the weight of a superincumbent cairn. Underneath the layers of horizontal woodwork some portions of heather, bracken, and brushwood were detected, and below this came a succession of thin beds of mud, loam, sand, gravel, and finally the blue clay which forms the *solum* of the river valley.¹ The piles penetrated this latter, but not deeply, owing to its consistency; and so the blue clay formed an excellent foundation for a structure whose main object was resistance to superincumbent pressure.

Outside the circle of piles there was, at a distance of 12 to 14 feet, another wooden structure in the shape of a broad ring of horizontal beams and piles which surrounded the central area. The breadth of this outer ring was 7 feet, and it consisted of some nine rows of beams running circumferentially. Beyond this lay scattered about some rough cobble stones, as if they had fallen down from a stone structure which had been raised over the woodwork. The space intervening between these wooden structures was filled up in its eastern third with a refuse heap, consisting of broken and partially burnt bones of various animals, the shells of edible molluscs, and a quantity of ashes and charcoal, evidently the débris of human occupancy. On the north, or landward side, the outer and inner basements of woodwork appeared to coalesce for 5 or 6 yards, leaving an open space having stones embedded in the mud and decayed wood, a condition of things which suggested a rude causeway. When Mr. Donnelly drew my attention to this, I demurred to its being so characterised owing to its indefiniteness. At the outer limit of this so-called causeway, and about 25 feet north-east of the circle of piles, a canoe was discovered lying in a kind of dock

¹ See *Proceedings of the Philosophical Society of Glasgow*, xxx. Fig. 4.

rudely constructed of side stones and wooden piling. The canoe measures $35\frac{1}{2}$ feet long, 4 feet broad, and $1\frac{1}{2}$ foot deep. It has a square stern with a movable board, two grasping holes near the stem, and three round perforations (2 inches in diameter) in its bottom. On the north-west border of the log-pavement a massive ladder of oak was found,*one end resting on the margin of the log pavement and the other projecting obliquely into the timberless zone between the former and the outer wood-work. It is thus described in the *Proceedings of the Glasgow Philosophical Society*:—¹

“Made of a slab of oak which has been split from the tree by wedges (on one side little has been done to dress the work), it is 15 feet 3 inches long, 2 feet broad, and $3\frac{1}{2}$ inches thick. Six holes are cut for steps, 12 inches by 10 inches; the bottom of each is bevelled to an angle of 60 degrees to make the footing level when the ladder is in position. On one side those holes show signs of wear by long use.”

An under quern stone, 19 inches in diameter, was found about half-way between the canoe and the margin of the circle of piles, and immediately to the east of the so-called causeway already described.

I carefully examined the surface of the log-pavement with the view of finding evidence as to the possibility of its having been at any time the habitable area of this strange dwelling-place; but the result was absolutely negative, as not a single particle of bone or ash was discovered in any of its chinks. This fact, together with the impossibility of living on a surface that is submerged every twelve hours, and the improbability of any land subsidence having taken place since prehistoric times, or any adequate depression from the shrinkage of the understructures themselves, compels me to summarily reject the theory that the Dumbuck structure in its present

¹ Vol. xxx. 270.

form was an ordinary crannog. The most probable hypothesis, and that which supplies a reasonable explanation of all the facts, is that the woodwork was the foundation of a superstructure of stones, built sufficiently high to be above the action of the tides and waves, over which there had been some kind of dwelling-place. The unique arrangement of the wooden substructures suggests that the central building was in the form of a round tower, with very thick walls, like the brochs and other forts of North Britain. The central space was probably occupied with a pole, firmly fixed at its base in the "well," and kept in position by suitable stays, resting partly on the stone "cairns" already described, partly in wooden sockets fixed into the log-pavement, and partly on the inner wall of the tower. This suggestion seems to me to be greatly strengthened by the following description of some holed tree-roots in Mr. Bruce's paper to the Scottish Antiquaries :—¹

"Midway between the centre and the outside piles of the structure what looked at first to be tree-roots or snags were noticed partly imbedded in the sand. On being washed of the adhering soil, holes of 12 inches wide by 25 inches deep were found cut in them at an angle, to all appearance for the insertion of struts for the support of an upper structure. On the outside, 14 inches down on either side, holes of 2 inches diameter were found intersecting the central hole, apparently for the insertion of a wooden key or trenail to retain the struts. These were found at intervals, and were held in position by stones and smaller jammers."

The outer woodwork formed the foundation of another stone structure, of a horseshoe shape, having the open side to the north or landside of the tower, which doubtless was intended as a breakwater. By means of the ladder placed slantingly against the wall of the central

¹ Vol. xxxiv. p. 438.

stone building access could be got to the top in all states of the tides.

The people who occupied this watch-tower ground their own corn, and fared abundantly on beef, mutton, pork, venison, and shell-fish. The food refuse and other débris were thrown into the space between the central structure and the breakwater, forming in the course of time a veritable kitchen-midden.

Besides the causeway on the north side, Mr. Bruce describes "a belt of stones, forming a pavement about six feet wide and just awash with the mud," extending westwards about twenty yards from the central cavity, till it intersected the breakwater.¹ These so-called pavements and causeways were probably formed during the construction of the tower with its central pole, or perhaps at the time of its demolition, as it would be manifestly inconvenient to transport stones to or from such a place, in the midst of so much slush, without first making some kind of firm pathway. Their present superficial position alone demonstrates the absurdity of assigning the Dumbuck structures to Neolithic times, as if the only change effected in the bed of the Clyde since then would be the deposition of a few inches of mud. At a little distance to the west of these wooden structures there is the terminal end of a modern ditch ("the burn" of Mr. Alston), extending towards the shore, and having on its eastern bank a row of stepping-stones; a fact which, in my opinion, partly accounts for the demolition of the stonework which formerly stood over them. So far, the facts disclosed by the excavations of the structures at Dumbuck, though highly interesting as evidence of the hand of man in the early navigation of the Clyde basin,

¹ Mr. Alston describes this causeway, and shows it on the plan as "leading from the 'central well' to the burn about 120 feet to west of centre of crannog."

present nothing very remarkable or improbable. It is when we come to examine the strange relics which the occupants of this habitation have left behind them that the real difficulties begin. From the recent publication of Mr. John Bruce's report on the subject,¹ I see that the author has profited from the critical opinions of his opponents by adopting the following classification of the relics:² "(1) Objects of types which are familiarly known to archæological science from their frequent occurrence in other sites of early occupation; and (2) objects of types which are not known to have been discovered elsewhere, many of which, however, bear a close resemblance in character to some of the objects found in the fort of Dunbuie."

In the first category he includes a number of pointed objects of bone, implements or worked portions of deer horn, three small flakes or scrapers of flint, an oval water-worn pebble of quartzite, with a hollow streak along its major axis ("tracked stone") (Fig. 34), several hammer-stones, whetstones, sinkstones, and a rubbing-stone showing on its edge some markings not unlike ogams, the understone of a rudely-constructed quern mill already referred to.

¹ *Proc. S. A. Scot.*, vol. xxxiv. pp. 437-62.

² As soon as these novel objects (included in Mr. Bruce's second category) came under my observation I pointed out their striking similarity in form, style, and ornamentation to those previously found in the fort of Dunbuie (*Glasgow Herald*, Jan. 7th, 1899, and *Prehistoric Scotland*, p. 440). Also in a more recent criticism denying their claim to be regarded as relics of the Stone Age (*The Reliquary and Illustrated Archæologist*, vol. vii. p. 107), I thus expressed myself: "The relics from both these stations can be readily divided into two groups, each group presenting totally different characteristics. Their most astounding feature is that, while one group in each station is quite in harmony with the antiquities generally found in analogous situations throughout the Scottish archæological area, the other two groups have such a family likeness that any tyro would at once classify them as products of the same civilisation." It is thus clear that Mr. Bruce and myself are in entire agreement as to the abnormality of a particular group of objects from both stations.

The second category contains a number of strange objects like spear-heads or daggers, showing more or less workmanship, and variously ornamented. One great spear-head (Plate XIII., No. 12), like an arrow-point, is 11 inches long and $4\frac{3}{4}$ inches wide at the barbs. The stem is perforated with two holes, in one of which there was a portion of an oak pin. It has a flat body and rounded edges, and is carefully finished by rubbing and grinding. One surface is ornamented with three cup-marks from which lines radiate like stars or suns, and the other has only small cups and a few transverse lines. There are some shaped stones, sometimes perforated for suspension, made of the same material; while another group of similar objects is made of cannel coal. All these are highly ornamented by a fantastic combination of circles, dots, lines, cup-and-rings with or without gutters, and perforations. A small pebble (Plate XV., No. 10) shows, on one side, a boat with three men plying their oars, and on the other an incised outline of a left hand having a small cup-and-ring in the palm. The most sensational objects in the collection are, however, four rude figures, cut out of shale (Figs. 50-53), representing portions of the human face and person. One, evidently a female, we are informed was found at the bottom of the kitchen-midden, a strange resting-place for a goddess; the other three are grotesque efforts to represent a human face. There are also several oyster-shells, ornamented like some of the shale ornaments, and very similar to the oyster-shell ornaments of Dunbuie. A splinter of a hard stone is inserted into the tine of a deer-horn as a handle (Plate XIII., No. 5); and another small blunt implement (No. 1) has a bone handle. A few larger stones with cup-marks and some portions of partially worked pieces of shale complete the art gallery of Dumbuck.

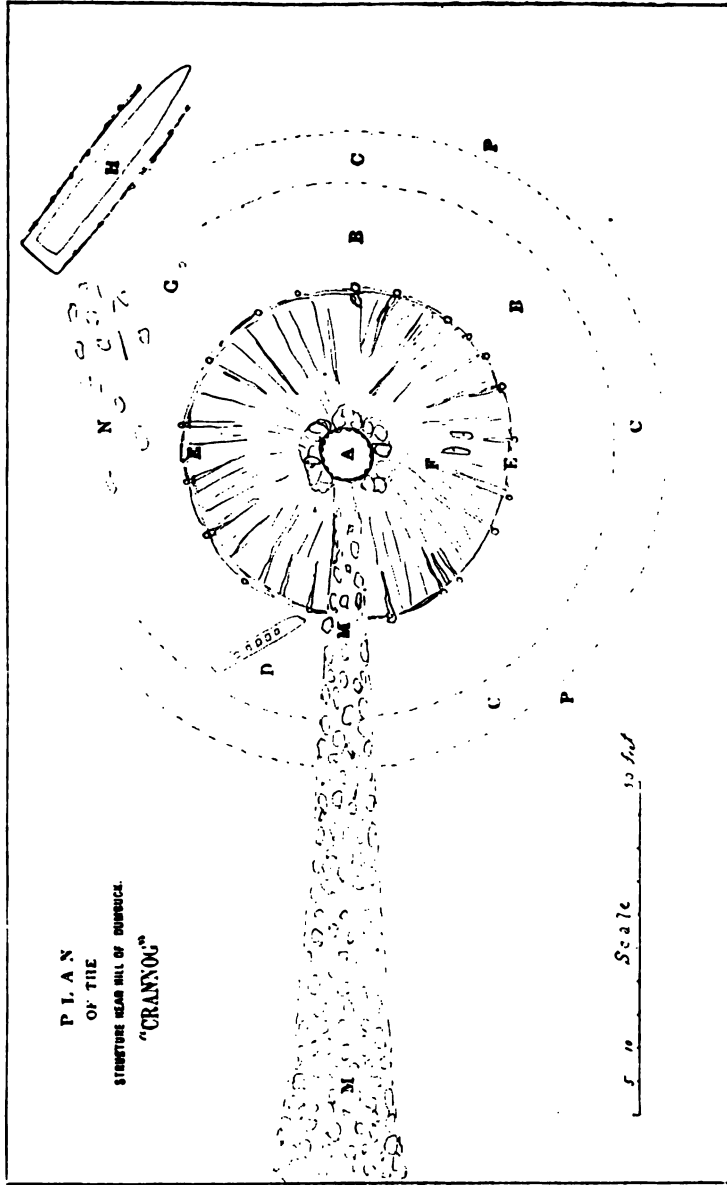
Explanation of the Plan

This plan of the so-called "Dumbuck Crannog" is reduced from a large plan sent to the Society of Antiquaries of Scotland along with the following explanations. The documents are dated Glasgow, August 24th, 1901, and signed W. M. Alston.

"The measurements taken for the construction of this plan show that the crannog consists of a central well or cavity (A), the sides being built of boulders lined with hazel wattle and blue clay. From this to a circle (E, E), about 50 feet in diameter, of oak piles originally twenty-seven in number, some of which are now removed, there is a floor composed of three layers of logs, the top and bottom layers radiating from central well to the circle of piles, and the mid row running circumferentially. Round the well (A) there is a rosette-shaped series of slightly raised stone mounds. Outside the above floored space there is a ring fully 20 feet wide, the inner 7 feet being of logs laid circumferentially (C, C), and secured at intervals by soft wood piles, and the remaining 13 feet in width (P, P) being of rough cobble-stones. The intervening space between this ring and the floored area (B, B) had in it remains of various kinds, such as shells, shale, and stone implements. At the north-east side of the structure there is a dock about 40 feet long and 6 feet wide, in which was found a canoe, now removed (H). A timber-floored jetty (N) leads to this dock from the circular area in centre. Leading from the central well to the burn, about 120 feet to west of centre of crannog, there is a rough causeway (M, M) composed of cobble-stones. On the circular-floored area there are several large timber logs (F) having holes in them, showing signs of burning, and evidently for the purpose of supporting stags.

"During the measurements for this plan special excavations and cuttings were made at certain places, the remainder of these parts covered by sand being filled in from general observations verified by probing."

In addition to these details I have to note that D marks the site of the ladder and G that of the quern.



PLAN
OF THE
STRUCTURE NEAR HILL OF DUNBRACK.
"CRANNOG"

50 feet
Scale

III. THE LANGBANK "CRANNOG"

The submarine wooden structure at Langbank, discovered by Mr. John Bruce, F.S.A. SCOT., in the autumn of 1901, and then partially explored,¹ has been subjected to further excavation in the following year, under the immediate superintendence of the discoverer, assisted by a committee of the Glasgow Archæological Society. The site lies within the tidal area on the south shore of the Clyde Estuary, near West Ferry Inn, and directly opposite to Dumbarton Castle. Through the kindness of Mr. Bruce, and of Dr. Bryce, of Glasgow, a member of the committee, I was afforded an opportunity of visiting the locality (September 29th, 1902) while the excavations were in progress, and, under their guidance, inspected the relics, the site of the refuse-heap from which most of the bones were extracted, and the structure and disposition of the woodwork. While walking over the site, the workmen made tentative diggings here and there, so as to clear up whatever doubtful points came under discussion. Hence I am enabled to lay before readers a trustworthy sketch of these interesting remains independently of the report of the committee, which for some unaccountable reason is still unpublished.

The main structure consists of a series of short piles, 4 to 5 feet in length, arranged in a circular form so as to enclose an area of about 60 feet in diameter.

The tops of these piles were just seen protruding a few inches through the gravel of the tidal shore, and like those of Dumbuck, were considerably worn by the to-and-fro action of the tides into round handle-like projections. Some were made of oak, and others of softer wood. Two on being pulled up clearly showed that their points had

¹ *Athenæum*, October 19th.

been fashioned by sharp metal tools, like the pile from Dumbuck, with regard to which there has been so much senseless disputation. A row of horizontal logs, partly kept in position on the outside by upright piles, ran along the circumference of the area; but the interior of the circle was mostly occupied with brushwood, now greatly decayed and more or less buried in gravel and mud. According to a statement by one of the workmen the greatest depth at which the decayed brushwood was found was eighteen inches. The results of digging a few sporadic holes, in our presence, satisfied us that the above estimate was correct. There was no evidence of the existence of a central hole like the "well" of the Dumbuck investigators.

On the east side of the circle, and separated from it by only a few paces, there appeared another arrangement of woodwork, in the form of a roughly rectangular area occupied by closely lying beams, reminding one of the log-pavement of Dumbuck. At its north-east corner we observed the ends of two horizontal beams, which met at an angle, and were fastened to the ground by three wooden pegs still *in situ*. It was difficult to trace the exact length of these pegs, as they could only be extracted in small fragments owing to the pulpy condition of the wood. Two were found to have penetrated the gravel over a foot beneath the beams. One which had evidently met with an unyielding obstruction showed, instead of a point, a large cauliflower excrescence, proving conclusively that it had been driven into the gravel with great force. At first my idea was that this outer woodwork corresponded with the outer ring at Dumbuck, but Mr. Bruce assured me that he had dug several trenches all round without finding any trace of wood. The refuse heap lay in the space between the main circle and this annexe, but bones of animals were occasion-

ally turned up in the débris in other parts outside the circle.

Although differing in some minor details, the general resemblance of the structures at Langbank and Dumbuck is unmistakable. Nor can there be much doubt that both served the same purpose, viz. as foundations for some kind of stone superstructures, on the top of which a few people had their abode. The rectangular annexe at the former might have been the foundation of a pier, tower, or fortlet, as an adjunct to the circular building. The less elaboration of the woodwork at Langbank than of that at Dumbuck is satisfactorily accounted for by the firmer consistency of the bed of the estuary at the former site, as well as by its less submerged condition at high tide and its greater proximity to the land. The smallness of the habitable area on both puts them out of the category of military forts; but the beacon and fish-bothy theories are plausible.

The few relics found in course of the excavations are interesting as giving perhaps a more understandable idea of the period of occupancy to the ordinary antiquarian mind than those of Dumbuck; but their chronological horizon seems to me to be precisely the same, viz. a date well on in the early Iron Age, posterior to the Roman occupation of that part of Britain.

They comprise the following objects (Plate XII.):—

(1) A small single-edged toilet-comb, made of a flat piece of bone, rounded above, and having a small hole in the middle of its upper margin. The most interesting feature of this relic is a "Late Celtic" design on one of its surfaces, formed of circles and intersecting segments of circles. The lines are sharply incised and executed with so much precision that they must have been made with compasses.

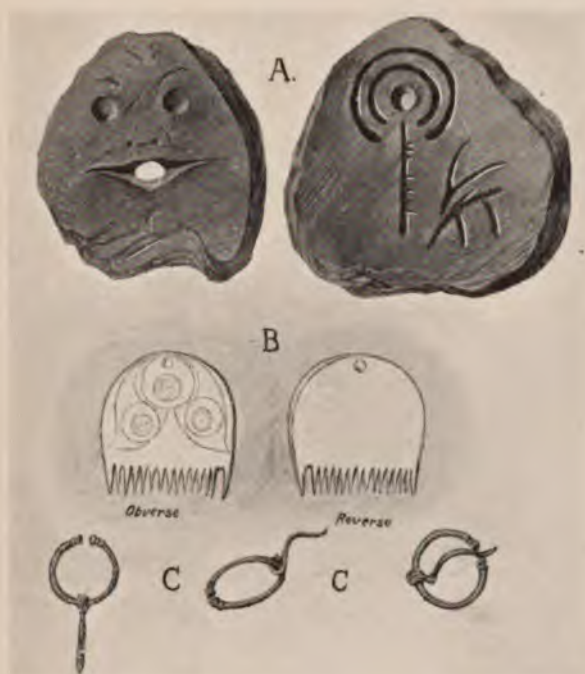
(2) A small bronze or brass penannular brooch, about

an inch in diameter, with a movable pin a little larger than the diameter of the brooch. The ends of the pennannular ring show two slight circular ridges, just sufficient to remind one of the ornamental expansions peculiar to the large Celtic pennanular brooches of early Christian times.

(3) A few cut fragments of deer-horn, pointed bones, stone polishers and hammer-stones of the usual types so commonly found on crannogs, brochs, and other early inhabited sites of Scotland.

(4) Two remarkable shale objects, both perforated, and not unlike those of Dumbuck and Dunbuie; one is fashioned into a grotesque human face; the other looks like a pendant plaque ornamented with two concentric but incomplected circles round the perforation, from which also runs a stem line with little nicks on one side suggestive of ogams. There are also on the same surface two incised figures, probably intended to represent fragments of deer-horn.

The conjecture that the Dumbuck structure had something to do with the early navigation of the Clyde is rather strengthened by the Langbank discovery; and should this surmise be correct the probability is that other analogous sites exist in the Clyde basin.



TWO SHALE OBJECTS, A BONE COMB AND A SMALL
PENANNULAR FIBULA OF BRONZE OR BRASS
FOUND AT LANGBANK

ALL $\frac{1}{2}$ ACTUAL SIZE

(From a drawing by W. A. Donnelly)

CHAPTER V

THE CLYDE CONTROVERSY

IF it could be supposed possible to characterise a series of incidents arising out of the ordinary "dry-as-dust" materials of archæology as a "tangled skein," the story of the Clyde controversy would be the first to justify the supposition. The question raised by the grotesque "idols" and the other novel objects which form the subject-matter of this controversy is the most important that has ever cropped up on the field of Scottish archæology, as it involves the consideration of a new civilisation within proto-historic times of which hitherto both historians and archæologists were equally ignorant. Although it is about eight years since it first presented itself in the form of a small cloud on the archæological horizon, its real significance does not yet appear to be fully understood, for if the materials in question be accepted as genuine the whole fabric of Scottish archæology goes into the melting-pot. Dating from 1896, with the investigation of the hill-fort of Dunbuie, the controversy has trailed along, in a desultory manner, through a voluminous newspaper correspondence, articles in literary and quasi-scientific journals, and even as communications to antiquarian societies, till, at the present time, one hardly knows what it is all about. In its progress it has been fanned by the discovery of fresh materials at Dumbuck (1898), and more recently at Langbank (1901 and 1902). Although the three stations

are more or less different in structure, the controversial element is the same in all, viz. a suspicion that some strange-looking objects, reported to have been found in their débris, are not genuine relics of the people who constructed and inhabited them. In 1899,¹ and again in 1901,² I gave a short description of the "finds" at Dumbuck and Dunbuie, in which, from the facts then disclosed, I could form no other opinion than that most of the so-called relics were spurious. But, since the discoveries at Langbank have complicated the field of discussion, no connected account of the issues involved has hitherto been published. It seems, therefore, that the present is a suitable opportunity for laying a succinct account of the whole matter before archæologists, so as to enable them to form an impartial judgment on the arguments *pro et con*.

Of the excavations and discoveries on the hill-fort of Dunbuie I knew at the time very little, except what could be gathered from paragraphs in the local press regarding the novelty of some of the relics. Being abroad when Mr. Millar's paper was read at the Society of Antiquaries of Scotland (April 13th, 1896), it was not till the relics became the property of the nation, and were located in the National Museum, that I had an opportunity of examining them. It is only fair to say that I did not then conceal from my secretarial colleagues my doubts as to the authenticity of some of them.

My first visit to Dumbuck was made in consequence of a letter which Dr. Joseph Anderson, Curator of the National Museum, and Assistant-Secretary of the Society of Antiquaries of Scotland, had received from Mr. W. A. Donnelly, stating that he had discovered a curious wooden structure in the basin of the Clyde, which, he suggested,

¹ *Prehistoric Scotland*, pp. 379, 437.

² *Proc. Society of Antiquaries of London*.

might be a crannog. Dr. Anderson, in his reply, said that he would submit the matter to me (being then one of the secretaries of the Society) as one specially interested in such antiquities. This visit was made on August 16th, 1898, and its avowed object was to give the discoverer the benefit of my experience in such investigations. The existence of a well-defined platform of more or less prepared logs and saplings within a circle of oak piles, in such a locality, was so unusual that I had no hesitation in recommending tentative excavations to be made along the margin of the circle, in order to ascertain with greater precision the disposition of the woodwork, and more especially to get some practical data for carrying out further excavations.

My second visit was some two months later (October 12th), while the excavations were in progress. On that occasion I stated openly in presence of all the investigators that, in my opinion, some of the objects then shown to me as relics of the occupiers of the supposed crannog were not genuine. Moreover, I communicated that opinion in writing, on the following day, in a letter hurriedly written in reply to one from the late Mr. Adam Millar, F.S.A. SCOT. (afterwards published by Mr. Millar in the *Glasgow Herald*, January 16th, 1899). The letter is as follows:—

“DEAR MR. MILLAR,

“October 13th, 1898.

“Thanks for your letter. I returned home deeply impressed with the importance of your Clyde crannog and the novel character of the structures revealed. Nothing could be more satisfactory than the care bestowed on the investigations by Mr. Donnelly, everything being carried out with skill and care; and I hope his services will be ultimately rewarded by something more substantial than mere archæological fame. I lay much value on the bones recovered, and I trust you will lose no time in putting them into the hands of Professor Cleland, of Glasgow University.

own position in the matter, to make a short statement of some general facts bearing on the results of this investigation for the enlightenment of all whom it concerns. I have no intention of trespassing on the undoubted rights and privileges of those who have undertaken, at much labour and expense, this investigation, by entering on a detailed description of the archæological phenomena disclosed by the excavations. I may, however, be permitted to say that, to my mind, the best explanation of the woodwork is that it formed the foundation of a stone building, or cairn, of sufficient height to place its surface beyond the reach of the waves at the highest tides. Here the occupants had some kind of dwelling from which the kitchen débris and food-refuse were thrown over the margin. The stout oak ladder would serve very well for mounting and dismounting in all states of the tide. The canoe does not necessarily carry us back to prehistoric times, as canoes are amongst the most common relics of the ordinary Scottish and Irish crannogs, so that the occupancy of the Dumbuck crannog may be ultimately placed as late as mediæval times. It is probable that when it was built the locality would be under water even at low tide. The gradual accumulation of mud along the shore is sufficient to account for its present stranded position at low water. Since the wooden foundation was laid the mud has increased around it to a depth at least equal to the thickness of the woodwork, the surface of both (*i.e.* woodwork and mud) being now on the same level.

“When I first visited the so-called crannog, by arrangement with Mr. Donnelly, shortly after its discovery, I had no hesitation in recommending its exploration on the ground of the rarity of such structures in marine estuaries. Mr. Donnelly was very anxious that I should there and then pronounce it a real crannog; but I pointed out that we had very little experience of marine crannogs in Scotland, that crannogs were habitations in fresh-water lakes or bogs, and that, although the wooden structures were disposed like those of the ordinary crannogs, we had as yet no evidence that they formed a place of habitation at all. The only analogous structure hitherto investigated was a cairn or mound of wood and stones near the island of Eriska, of which, however, though present at its excavation, I could

not give any rational explanation.¹ On my return home I sent Mr. Donnelly some literature on crannogs, and took the opportunity by letter of cautioning him against saying much about his discovery until its nature would be more clearly revealed by practical research. I was then leaving home to fulfil an engagement in England, and on my return, some three weeks later, the Dumbuck crannog was already famous. Descriptions and illustrations of the woodwork, the canoe, and a remarkable series of objects, were published in numerous journals. For some weeks I heard nothing more on the subject beyond second-hand rumours of extraordinary discoveries, till Mr. John Honeyman intimated a desire to have a consultation with Dr. Joseph Anderson and myself regarding the possibility of constructing a model of the Dumbuck crannog, for the purpose of being shown at the forthcoming exhibition at Glasgow. He was rather astonished to find that we had no information on the subject. Mr. Honeyman very kindly agreed to make arrangements for another visit to Dumbuck, in conjunction with some members of the Glasgow Archæological Society. Accordingly, a few days later I had the pleasure of joining a party of gentlemen who, like myself, were anxious to see the famous crannog; and among the party were Mr. Adam Millar, F.S.A. SCOT., and Mr. John Bruce, F.S.A. SCOT., who, along with Mr. Donnelly, superintended the excavations. Mr. Millar had in his possession a case containing some of the exceptional relics already discovered, including a large spear-head, like a winged arrow-point, made of slate, a rudely formed human figure manufactured out of a piece of shale, and a number of other objects of stone or shale, perforated and ornamented with incised patterns, small cup marks, concentric circles, etc. The discussion in the railway carriage on our way to Bowling centred on the theory that these objects were the relics of a pre-Celtic civilisation. Readers may fancy the astonishment of the party when I unceremoniously suggested an alternative theory, viz. that they were products of the nineteenth-century civilisation.

“Mr. Donnelly was waiting for us, and after getting ourselves rigged out in big boots we made our way, ankle-deep in mud,

¹ *Proc. S. A. Scot.*, vol. xix. p. 92.

to the crannog. Here we inspected the canoe, a heavy oak beam with four or five ladder-like steps cut out of the solid, the remains of a kitchen midden containing ashes and quantities of broken bones, and a circular area paved with prepared timbers, some of which bore the marks of a metal axe. I was very anxious to see the rest of the relics, as I had heard of a barbed harpoon being among them, so Mr. Donnelly very kindly sent one of his men to fetch them. These I looked over carefully. Among the stone objects (excepting the precious objects in the case) I could not say with certainty that any of them had been fashioned by the hand of man, or showed any signs of having been used as implements. There were no 'flint implements' of any description, and hence this ground for assigning the crannog to the Neolithic period has no foundation in fact. Some of the bones had the appearance of having been shaped into pointers, but being then covered with a layer of decomposed bone, due to maceration, all evidence of workmanship, if they ever had any, had disappeared. The harpoon seemed to me to be a portion of a partially disintegrated lower jaw retaining the marks of the animal's teeth on one side. Several pieces of stag's horn were observed to have been *sawn* right across. We all complimented the excavator on the excellent way in which he had so far carried out the excavations, and made various suggestions as to the best method of continuing the operations.

"Before leaving I pointed out that the osseous remains were the most important of the finds, as it was to them we had especially to look for evidence of the age of the dwelling, and recommended that a selection of them be at once sent to a specialist to be reported on. As for the stone weapons and the other relics in the case, I ignored them altogether, stating that, in my opinion, they were not productions of the people who constructed and inhabited this strange place.

"Next morning I received a letter from Mr. Millar (12th October) in which, *inter alia*, he informed me that 'his friend Donnelly was rather depressed by my suspicions as to the genuineness of some of the finds.' To this I replied that, while giving Mr. Donnelly due credit for the judicious way in which the excavations were conducted, I could not admit the genuineness of certain relics said to have been found in the excavations,

nor of the 'idol' picked up from the mud in the canoe. I expressed my conviction that there was some mystification at work which it was his duty to explain, and suggested that a committee of experts be appointed to inquire into the matter, etc. (see page 151). But to this appeal I received no reply.

"Sometime subsequent to this I incidentally met Mr. Bruce at the railway station of Lanark, and he there showed me two oyster-shells, perforated and ornamented, which he stated had recently been found at Dumbuck; but as the train was on the point of leaving I had no time to discuss the matter with him. A few days afterwards I wrote him a letter, directing his attention to my previous communications to Messrs. Donnelly and Millar, and urging him to appoint a committee of inquiry as to the origin of these marvellous finds and their relevancy to the crannog investigation. To this he replied (November 18th):— 'I am much obliged for your favour of the 16th, and quite understand your position. I had a talk yesterday when in Edinburgh with Dr. Anderson, and agreed to let matters remain at present *in statu quo*.' So ended my connection with the Dumbuck crannog. Since then, however, I have incidentally seen two or three consignments of relics purporting to have been found at Dumbuck, among which were two more representations of portions of the human form, rudely incised on fragments of shale, along with some perforated pebbles, ornamented with meaningless designs.

"But the archæological interest of this discovery does not by any means end here. Three years ago the Helensburgh Naturalist and Antiquarian Society excavated the hill-fort of Dunbuie, also discovered by Mr. Donnelly. This fort is situated on a commanding height just overlooking the site of the Dumbuck crannog. The result of this investigation produced a profound sensation in archæological circles, as it revealed a whole series of relics totally different from anything previously known within the Scottish area, or, indeed, within any area known to me either in Europe or elsewhere. Mr. Adam Millar read a paper on these discoveries at the Society of Antiquaries of Scotland, which is published in their *Proceedings* for 1895-6, with numerous illustrations of the objects. After a cleverly written review of the position to be assigned to the Dunbuie relics in

the early civilisation of Scotland, Mr. Millar expresses his general conclusion as follows :—

“ ‘ But the absence of Roman influence is not so startling as the fact that there is nothing in the productions of this fort to show the influence of Celtic civilisation—the ornamentation is not Celtic, but pre-Celtic. Both the Roman and the Celtic civilisations were foreign in their origin. The Celts in Britain were skilled workers in metals before Julius Cæsar landed; they had established themselves as conquerors several centuries before the Roman invasion. Yet their influence, however dominant it was in the southern end of the island, may not at this time have reached the wild native tribes who lived by the chase in the rugged hills and closely grown woods of Dumbartonshire.’¹

“ It is only now, with the full light of these prior researches, that a climax is reached in the importance of the Dumbuck discoveries. On comparing them with the relics of the pre-Celtic inhabitants of Dunbuie, now fortunately preserved in the National Museum, their similarity and parallelism in form, style, and ornamentation are so striking that the merest tyro in archæology cannot fail to perceive that they are both not only products of the same civilisation, but of the same artists. For these pre-Celtic folk were very artistic in their ways, ornamenting everything, even their spear-heads. But artistic genius is not a new element in archæology, for long before the pre-Celtic period in Scotland the caves of the Dordogne were inhabited by a race of hunters whose carved works on ivory and bone excel even those of the shale workers of the Clyde. But perhaps, as both are pre-Celtic, the latter may have been descendants of the former, and may thus have acquired their artistic tastes and skill through heredity!

“ Let me also observe, for the whole subject is full of suggestive matter, that all the objects in the combined collections from Dunbuie and Dumbuck which can be labelled as weapons—some half-dozen spear-heads—are made either of slate or shale, and are absolutely worthless as real weapons, so that they must have been manufactured for some other purpose, perhaps to adorn the walls and battlements of their hill and sea-

¹ *Proc. S. A. Scot.*, vol. xxx. p. 308.

side residences—for it would be a violent contradiction to all our experience of prehistoric man to accuse him of using unsuitable material for any purpose whatever. Some suggest that the black figurines were idols, others that they were children's toys. The same may be said of the amulets and ornamental pendants. Indeed, a childish, meaningless touch characterises them all, whatever may have been their purpose. Is it not of surpassing interest to find a fort on a cold, bleak hill, and a stone crannog on the Clyde, containing so many children's playthings, and almost nothing else?

"In attempting to solve the riddle of this most remarkable art gallery—idols, amulets, and ornaments of shale and shell—there are just two alternative conclusions to be formulated. Either these objects are what the investigators assert them to be—the genuine relics of the inhabitants of the fort and crannog, or they are not. On the former hypothesis we have before us the most remarkable collection of archæological remains ever found in Scotland. On the latter, they are the productions of some idle, practical joker.

"One word in conclusion. I wish to state that I have not the slightest clue to the *provenance* of the relics whose genuineness I here call in question, as my opinion is based entirely on their inherent character and total variance with all other archæological remains known to me."

The appearance of the above article was at first regarded by many as a "bolt from the blue," and a *volte face* on my part, so little was it known that I had openly expressed the very same opinion three months earlier. In course of the animated controversy which ensued in the columns of the *Herald* only two correspondents came forward in support of my views, viz. the Rev. Robert Munro, Old Kilpatrick, then personally a stranger to me, and an anonymous writer who signed his letter "F.S.A. Scot." From Mr. Munro's letter I have pleasure in quoting the following extract, from which it will be seen that he was the first to direct attention to the questionable nature of some of the "finds" at Dunbuie.

"OLD KILPATRICK, *January 7th, 1899.*

"SIR,—At the start, when the Dunbuie finds were brought before the notice of our local Naturalist and Antiquarian Society, I felt constrained to object to the genuineness of several of the articles shown, on the very same grounds that they are now objected to by Dr. Munro. Not only are they dissimilar in type from anything else of the kind found in Europe—and so cannot be placed in any recognised class or system—they consist of objects almost exclusively made of slate or shale, materials easily workable by a nineteenth-century Neolithist, but materials never voluntarily selected by genuine primitive man when better and more suitable substances lay, as in the present instance, ready to his hand. Besides, the carvings and lines on many of the objects in question are so clear and fresh as at once to suggest that they are of recent origin. So convinced was I of the truth of this position that I again gave expression to it at Edinburgh in 1896, after hearing Mr. A. Millar, F.S.A. SCOT., read his paper on the subject before the Society of Antiquaries. The so-called crannog at Dumbuck may or may not be a crannog—possibly it has not yet been fully investigated so as to disclose all its details—but its contents are even more marvellous than those of the fort.

"In any case the Helensburgh Antiquarian Society cannot allow the matter to rest where it does. It is bound, I think, in the interests of scientific truth, to sift the matter to the bottom. It can scarcely refuse to accept the challenge of Dr. Munro that all the various finds be submitted to experts to give their final decision in the matter. Mere newspaper controversy or logomachies of whatever kind will not advance the matter one step. If the fort of Dunbowie and the wooden site on the Clyde are to throw any light on the past, or to be of any help in adding to our knowledge of the science of archæology, there ought to be no difficulty or unwillingness in the way of agreeing to subject all the objects to the most open and searching scrutiny. This much Dr. Munro and all those who are of the same opinion with him are entitled to ask.

"I am, etc.,

"ROBERT MUNRO, B.D., F.S.A. SCOT., F.R.S.E."

On the other hand, numerous opponents to my views entered into the fray, many writing in a tone of unnecessary anger, and all condemning my action as "hasty," "injurious," "mischievous," and even "brutal." But for such language it will be now seen that there were no grounds whatever.

RECEPTION GIVEN TO THE DISCOVERIES AT DUMBUCK
BY VARIOUS ARCHÆOLOGICAL SOCIETIES

I now proceed to describe briefly the reception given to papers of Messrs. Donnelly and Bruce on the Dumbuck "crannog," successively read at the Glasgow Archæological Society, the British Archæological Association, and the Society of Antiquaries of Scotland.

i. *Glasgow Archæological Society*

At the monthly meeting of the society, held on the 19th January, 1899, Dr. David Murray, LL.D., President, in the chair, Mr. W. A. Donnelly read a paper on the Dumbuck crannog. As Mr. Donnelly's paper has not yet been published in the *Transactions* of the society, I am obliged to fall back on a report which appeared on the following day in the *Glasgow Herald*. This is unfortunate, as one naturally expected that such an interesting discovery in the neighbourhood of Glasgow would be more fully described in the publications of that society than anywhere else.

According to the newspaper report, the Hon. Secretary (Mr. J. Dalrymple Duncan) and others expressed great sympathy with the investigators, but no archæological discussion took place. The speech of the President is thus reported:—

"He was sorry it should have been thought necessary that anything should be said with regard to the suggestion of forgery. He thought that was a question to which prominence

should not be given by discussing it. The discovery of the crannog was a matter of very great interest. The shale articles found were proof of the genuineness of the discovery. Similar articles had been discovered in the valley of the Clyde, and that had a good deal to do with the age of the structure, which, he thought, would take them back to somewhere about the period of the Roman occupation. He thought it was utterly out of the question to say that the articles were Palæolithic, but undoubtedly they might be Neolithic."

ii. *British Archæological Association*

It appears that this Association was kept well informed of the progress of the Dumbuck excavations, as there is, in the September number of the *Journal* (1898), a graphic account of the discovery of the "crannog" and of some of its earlier relics, including the canoe, ladder, spear-heads, some of the shale images, etc. These notices are continued in the next number of the *Journal* (December, 1898), and on the 15th March, 1899, we are informed that Mr. Donnelly read, at a meeting of the Association, a "most interesting paper on his recent discoveries of prehistoric remains in the Clyde valley," which, of course, included a description of the "crannog" and its relics.

In these communications some curious information is given as to the position of some of the relics. In the September number of the *Journal* (p. 282) we are informed that a slaty spear-head, an arrow-head of bone, and a sinker stone were found in the débris inside the canoe. "In the cavity of a large bone," says the writer, "was also got an ornament of a peculiar stone. The digger unearthed it from the deposit at the bottom of the canoe, about 14 feet from the bow and near to a circular hole cut in the bottom about $3\frac{1}{2}$ inches in diameter." What a funny place to hide a precious ornament, for I take this peculiar stone to be that with the human hand

incised on one side and three men rowing in a boat on the other ! (see Plate XV., No. 10).

With regard to Mr. Donnelly's paper (read March 15th, 1899), Dr. Brushfield, in the course of the discussion, said: "There could be little doubt that the structure and remains belong to the Neolithic Age; the absence of metal in the discoveries indicated that fact."

The Rev. H. J. Dukinfield Astley, editorial secretary of the Association, in criticising the paper, made a statement to the effect that my opposition to the Neolithic theory of Dumbuck was due to personal reasons. On reading a report of the meeting, which appeared shortly afterwards in the *Athenæum*, I addressed the following letter to the editor (published 8th April, 1899):—

"In a report of a meeting of the British Archæological Association, which appeared in your issue of the 25th instant, the Rev. H. J. D. Astley states that, owing to the controversy which has arisen on the subject of the Dumbuck crannog, he had been led to renew his acquaintance with Dr. Munro's writings, and that 'he saw at once two very plain reasons for the learned doctor's recently assumed attitude on this question, viz. that, supposing the Clyde crannog should be assigned, as Mr. Donnelly and others infer, and Dr. Brushfield admits, most probably to the Neolithic Age, it would disprove two of Dr. Munro's most cherished theories—(1) that there was an upheaval of the West Coast of Scotland, forming what is known as the twenty-five-feet break, corresponding to a depression of the western and southern coasts of England, at some time subsequent to the Roman occupation; and (2) that the idea of pile dwellings or crannogs was a later importation of the Celtic peoples into the British Islands.'

"Will you kindly allow me to make the following remarks on these extraordinary statements?

"1. My attitude on the question of the Dumbuck crannog has not been recently assumed. My opinion was openly ex-

pressed to the investigators on the occasion of my visit to the crannog, and communicated in writing to them next day (October 13th, 1898). This letter has since been published in the *Glasgow Herald* of January 16th, 1899. (See *supra*, p. 151.)

"2. I never cherished, and nowhere published, the opinion that the upheaval of the West Coast of Scotland, indicated by the twenty-five-feet raised beach, was subsequent to the Roman occupation. My theory is the very opposite to this, viz. (quoting the *ipsissima verba*) 'that in Scotland this movement was subsequent to the appearance of man in the district, but *prior* to the Roman occupation of Britain.'¹

"3. I do not know of any crannog in Scotland that can be assigned to pre-Roman times, nor do I know of a true pile-dwelling in Scotland belonging to any period. Mr. Astley says that he desires at present to preserve an open mind on the subject. If he continues this attitude long enough, he may ultimately come to see the incongruity of holding that a wooden structure, consisting of three layers of beams resting on comparatively recently deposited mud on the banks of the Clyde, and having associated with it a canoe (barely covered with that mud), a quern, and the bones of the ordinary domestic animals, is a monument of the Neolithic Age. Meantime the *Journal* of the association of which he is the honorary secretary has the distinction of illustrating the first Neolithic quern found within the British Isles, dated two thousand years before the Christian era! At that time, in my opinion, the very mud on which the so-called crannog so proudly reposes was probably still undisintegrated in the bosom of its mother rock. But while Mr. Astley keeps his mind open with regard to these and such like theories, I would recommend him, before entering on the field of motives, to discard the weapons of misquotation and misstatement of facts."

A reply to this appeared on April 29th, the purport of which was that the report of the *Athenæum* was inaccurate. The explanation of the adroit way in which my upheaval theory was altered, so as to give plausibility

¹ *Journal of the Archaeological Institute*, September, 1898, p. 285.

to the charge of having opposed the Neolithic theory of Dumbuck for selfish reasons, was as follows :—

“I can assure Dr. Munro that I quoted him in my remarks with perfect exactness. My argument was as follows : If it is the case that there was an upheaval of the West of Scotland, indicated by what is known as the twenty-five-feet raised beach, at some time subsequent to the appearance of man in the district, but prior to the Roman occupation, then it is quite plain that no structure, whether crannog or not, of the Neolithic Age could be found in the bed of the Clyde at the present level, in the position which the Dumbuck (so-called) crannog occupies.”

I made no reply to this illogical statement, as anyone could have seen that, if he really quoted me correctly, there was nothing in my theory to prevent a crannog being constructed during, at least, some portion of the Stone Age with as much facility as at any subsequent date. On the other hand, according to the post-Roman theory, which implies that the site of the crannog previous to the upheaval would be covered with water to the depth of twenty-five feet, in addition to the three feet to eight feet which now cover it at every high tide, it would be practically impossible to construct anything in such a depth of water.

Shortly afterwards Mr. Astley (the author) kindly presented me with a copy of an article entitled “On Ornaments of Jet and Cannel Coal, on Cup-and-Ring Markings, and on Slate Weapons, as characteristic of the Neolithic Age.”¹ The main purport of this paper would appear to be to prove, by archæological evidence, that the shale and slate ornaments, weapons, and all the other heterogeneous objects of the Dumbuck crannog belong to the Stone Age. A mere glance at its contents disclosed so many misstatements and misrepresentations,

¹ Reprinted from the *Journal of the British Archæological Association*, June, 1900.

especially of my own archæological opinions, that I thought it advisable to take public notice of his facts and argumentative methods. So I wrote a review of his paper and forwarded it for publication in the *Reliquary and Illustrated Archæologist*, where it appeared in due course (April, 1901), under the title—"Is the Dumbuck 'Crannog' Neolithic?"¹

In due course, another contribution to the Dumbuck controversy appeared from the pen of Mr. Astley, which, he informs us, "is in substance throughout, and particularly in the appendix," a reply to my criticism of his former paper in the *Reliquary and Illustrated Archæologist*.

Like its predecessor, this brochure, which extends to thirty-three pages, with drawings of three "idols" from Dumbuck, a "Churinga from Dunbuie" (Plate XVII.), and what purports to be an oyster-shell² having a human face carved on it, is a reprint from the *Journal of the British Archæological Association* (September, 1901). Its title-page bears the following: "Some Resemblances between the Religious and Magical Ideas of Modern Savage Peoples and those of the Prehistoric Non-Celtic races of Europe." Part of the wide scope of this inquiry is thus defined:—

"In the course of our argument we shall also prove that certain implements and amulets, weapons and figurines, and

¹ The reason for the appearance of this review was that the Council of the Association declined to publish in their *Journal* a critical reply to Mr. Astley's statements, notwithstanding that my remarks were restricted to a contradiction of misrepresentations affecting myself alone, so as to counteract the erroneous doctrines to which they had given currency in my name. With this review I incorporated the substance of my letter to the Council (pp. 114 onwards to the close of the article), the only material alteration being the change from the second to the third person.

² There is no object in the Dunbuie collection like this so-called "Churinga," nor an oyster-shell carved with a human face. The only object in the Clyde Art Gallery that has a resemblance to the former is a shale amulet from Dumbuck (Pl. XV., No. 2); and as to the oyster-shell, I presume it is a mistake for the famous limpet-shell so adorned (Fig. 54).

rock-drawings, about which there has been much discussion, and which are confidently pronounced to be forgeries in certain learned quarters, are not by any means unusual—were, indeed, to be expected—are in all probability genuine; and that, as genuine, they are most interesting relics of a stage of culture for which a place *can* be very easily and naturally found in the civilisation of our islands; while, should they after all ever be *proved* to be not genuine—and the *onus probandi* lies upon their detractors—the line of argument adopted in this paper is not thereby in the smallest degree invalidated; it only possesses one proof the less; one link in the chain of evidence is removed, but the chain can be made complete without that link.”

From this extract it would appear that criticism is unnecessary, as the disputed relics of Dumbuck are of secondary importance to the real object of the paper—merely a “superfluous link” in a chain otherwise completed. In short, the author holds that, if they are not genuine they ought to be, as such things were, indeed, to be expected.¹

When the Langbank structure was finally excavated, as described on page 145, Mr. Astley was early on the field with his opinion of the new discoveries. In an

¹ As this paper was merely a *rechauffé* of his previous arguments and misrepresentations to which I had already replied (*Reliquary*, vol. vii.), I took no notice of it. Moreover, by this time it was evident that Mr. Astley's mind was impervious to legitimate argument. In this new effort he again freely indulges in quotations; but like those of his previous paper, they are all more or less garbled, as the following, which is selected because it is short, will show:—“Dr. Munro asserts that the ‘ornaments of jet, amber, and bone,’ mentioned by me, ‘can be definitely assigned to the Ages of Bronze and Iron.’ This cannot be the case.” He then goes on to show from Bateman's *Ten Years' Diggings* that some jet ornaments belong to the Stone Age. Anyone not conversant with Mr. Astley's methods, on reading the above, could hardly avoid agreeing with him. But alas! misquotation, the besetting weakness of the Dumbuck champion, again humiliates him. The words I used were, “the majority of ornaments of jet, amber, and bone,” etc. (see *Reliquary*, vol. vii. p. 113).

article entitled "Some further Notes of the Langbank Crannog,"¹ he introduces the subject as follows :—

"Some might be disposed to say : 'Have we not had enough of these Clyde crannogs? After all they concern the Scotch archæologists more than they do us, and we might well leave them to fight out the battle for themselves.' But I think this would be taking a narrow, parochial view of the subject. We are the *British* Archæological Association, and it behoves us, each one, to prove unceasingly, 'Nihil a me *Britannicum* alienum puto.' Moreover, the problems embraced, as they involve far-reaching questions on the condition of Early Man in this island, are of importance to all *British* archæologists."

It will be remembered that our author in his previous brochures fought on the side of the defenders of the Neolithic theory of Dumbuck, maintaining that the very piles were cut and sharpened by stone implements.² It is therefore interesting to know what his position in the controversy now is.

"My own first impression," he writes, "was that the Langbank crannog might, from these evidences, be adjudged of later

¹ Reprinted from the *Journal of the British Archæological Association*, April, 1903.

² Those who are not above desiring amusement from archæological discussions may turn to the following reply which Mr. Astley has made to my evidence that the piles at Dumbuck were fashioned with metal tools :— "Dr. Munro and his friends would, without doubt, have propounded an equally emphatic opinion—so universally accepted—that the tool-markings and the cutting of the mortice and tenon-joints at Stonehenge were the 'result of sharp metal tools.' But now, as I write, even these colossal works in hard stone are proved to have been fashioned by the despised Neolithic axe. How simple, after this, was the sharpening of the Dumbuck piles. And yet it is on the theory of the impossibility of any such thing that Dr. Munro throws down his sheepskin and challenges 'the final *coup* to the Neolithic theory of Dumbuck.' I accept the challenge—so may it be. Let the evidence now forthcoming of the higher stage of Neolithic culture, as disclosed at the great monument, be the *coup* to my contention of the origin of the ornaments and work at Dumbuck, or to the pre-Baconian theories of all those who would deprive the Neolithic race of even the very rudiments of ornament, art, or hewn architecture" (*Brochure No. 2*, 1901, p. 33).

date than that of Dumbuck; but since the discovery of the amulets, and seeing that the style of construction is in both cases similar, and that the 'finds' in each fall into line with the other discoveries at Dunbuie and Auchentorlie in the immediate neighbourhood, I would assign all to about the same period, viz. somewhere towards the close of the Roman occupation of Britain, when, as may be inferred from Bede, the Picts, who were the natives of the locality, would appear to have been still in the Neolithic stage of culture. The amulets of Cannel coal, together with the inscribed slate and shale spear-heads, shells, and rounded stones, belonged to the original constructors and inhabitants of the crannog, and bore a very real and vital relationship to their religious and totemistic arrangements; the brooch and comb belong, if not to a later time, at least not to the original inhabitants, but to a Celtic tribe who may very probably have invaded and ousted them from Langbank, and dwelt in their settlement."

With the above finally amended statement Mr. Astley's opinions may henceforth be allowed to drop out of the controversy—noting, however, the fact that he now assigns the three stations, Dunbuie, Dumbuck, and Langbank, to "somewhere towards the close of the Roman occupation of Britain."

[Since the MS. of this volume was placed in the hands of the publishers a new side-issue regarding some strange objects, said to have been found in Portuguese dolmens, has been imported into the Clyde controversy, in which Mr. Astley has taken a prominent part. In a communication to the *Antiquary*, April, 1904, he writes: "I will merely say here, on this point, that my arguments are brought to a scientific conclusion in my paper, 'Portuguese Parallels to Clydeside Discoveries,' reported in your issue for March, which will shortly be published."

I have seen the article in *Portugalia* and the published "scientific conclusion" of Mr. Astley (*Journal of B. A. A.*,

April and August, 1904), and can only say that, even had I space to discuss the matter I would not do so for two reasons. First, because I see no parallelism whatever between the contrasted objects from the Portuguese dolmens and the Clyde ancient sites, beyond the fact that they are both "queer things." And, secondly, because some of the most eminent European scholars regard the objects described and illustrated in *Portugalia* as forgeries. The learned Director of the *Musée de St. Germain*, M. Salomon Reinach, thus writes about them: "Jusqu'à nouvel ordre, c'est-à-dire jusqu'à preuve formelle du contraire je considère ces pierres sculptées et gravées comme le produit d'une mystification. J'aimerais connaître, à ce sujet, l'opinion des autres savants du Portugal" (*Revue Archéologique*, 4th S., vol. ii., 1903, p. 431).]

iii. *Society of Antiquaries of Scotland*

On the 8th of May, 1899, Mr. John Bruce, F.S.A. SCOT., read an account of the excavation of the Dumbuck "crannog" at the monthly meeting of this Society, Sir Arthur Mitchell, K.C.B., M.D., LL.D., in the chair. The author confined his remarks to a description of the structural details of the crannog—characterising it as a pile-structure—and of the relics associated with it, without expressing any opinion as to the age or period to which the remains belonged. Unfortunately, owing to delay in transit, the boxes containing the bulk of the relics had not arrived in time to be exhibited at the meeting, so that the only relics then shown were a quern and an oak pile freshly pulled (at my request), which had been forwarded at an earlier date.

In commenting on the facts laid before the Fellows, I especially directed attention (1) to the cutting marks made in pointing the wooden pile which I attributed to a metal axe; (2) the presence among the relics of a

quern ; and (3) the superficial position of the structure in the Clyde deposits, as conclusive evidence that the site and its remains were of post-Roman date.

Sir Arthur Mitchell, in thanking Mr. Bruce for his communication, suggested that before publishing this record in the *Proceedings* it would be desirable to have the site carefully surveyed by the engineers to the Clyde Trust, with reference to its present submerged condition. The only outcome of this, so far as I know, was the following statement which appeared in the *Glasgow Herald* about the middle of June, 1899 :—

“THE DUMBUCK CRANNOG.

“(FROM A CORRESPONDENT.)

“The work of examination and excavation of this remarkable archæological discovery still continues, as does the lay and scientific interest in its features and revelations. In a world-wide correspondence which has flowed in upon Mr. Donnelly, the discoverer of the crannog, it is seen that the conditions of the Clyde in the distant past have a very wide interest both for the student and the historian. Since its discovery in July last year, as notified and described in the pages of the *Herald*, and so graphically illustrated in the *Evening Times*, the crannog has been visited by some dozen learned societies and thousands of the general public. It has also been the special study of experts in this field of archæology, with the result that the find stands to-day an assured evidence and relic of the ancient dwellers on the banks of the Clyde—the man of the Stone Age. Amongst the eminent scientists who have taken special interest in the crannog, and in practically examining the objects recovered from it, is Sir Arthur Mitchell. Sir Arthur, after hearing Mr. John Bruce's paper read before the Society of Antiquaries in Edinburgh, suggested that Mr. W. A. Donnelly, artist, should, besides his large collection of drawings of the crannog, its features and finds, execute a number of sections and all still remaining unrecorded features. Sir Arthur further extended his sympathetic interest by requesting Mr. James Deas, Sen., C.E., engineer to the Clyde Trust, to include this

crannog in the present survey being made of the Clyde and foreshores, and the taking of levels on and near the crannog. This has been done. Mr. Deas instructed two of his assistants—Mr. Robertson, c.e., and Mr. Mitchell, c.e.—and their men to make a special and minute record of the crannog site, features, and levels. This work has been executed this week, to the entire satisfaction of Mr. Donnelly, who guided in the work in such a way as to make it possible to have many important features recorded which under other circumstances would have been omitted, or would have cost much expense and labour to re-excavate. At the crannog these June days the scene was very picturesque, the boats of the Clyde Trust riding idly in the offing, while the sun-browned Clyde Trust men, so physically fit, toiled and laboured in the tropical sun, guided by Mr. Mitchell and Mr. Robertson. Many cuttings and sections were made, east, west, north, and south. Mr. Donnelly made it possible for them to do what has not hitherto been done—a section right into the crannog proper, wedge-shaped, in fact, a segment of the circular structure, revealing the fact so often recorded, that it is a timber structure, not a stone one. Several valuable finds were made while prosecuting this work—some stone spear-heads and also horn implements, large teeth, ribs, and chisels of horn. Mr. Robertson also unearthed a very formidable oaken war club, four feet six inches long. The outstanding feature was revealed that the crannog was built on the secure foundation of a splendid bed of the finest blue clay. When Mr. Deas has his plan and sections made from the very exhaustive measurements and levels it will form an independent and authoritative chart from which the actual position and levels of the crannog can be ascertained. The work was very trying in the waters and mud of the foreshore under a sun which recorded a temperature of 117 degrees in the light. Scientists all over the country are greatly indebted to Mr. Deas for the sympathetic and practical manner he has approached this antiquarian work, and Mr. Donnelly speaks in glowing terms of the efficient and practical manner in which the Clyde Trust men have executed the work on every occasion. Mr. Donnelly and his men, on behalf of the Helensburgh Society, have excavated 30,000 cubic feet of clay, sand, and mud since first

the excavations were begun. Some of the most important parts are yet to be done, such as the well, the southern break-water, and the dock in which the great war canoe was found. Advantage is being taken to have this work done while the weather is favourable, and, as hitherto, all important facts of value will be recorded in the press."

I heard little more of the Dumbuck discoveries till the Annual Meeting of the Society on the 30th of November, 1899, when the Secretary announced that Mr. Bruce had "kindly consented to recast his paper on Dumbuck for the present session, when it would be read and the whole of the finds exhibited."

At the meeting of the Society (May 14th, 1900) Sir Arthur Mitchell, K.C.B., again presided.¹ The paper, as recast, contains little that is new. There is, however, a singular omission. In his account of the animal remains there is no mention made of fragments of the horns of the fallow-deer. Now when I visited the crannog I was shown two or three fragments of some kind of palmated horn, which I was told had been identified as those of the fallow-deer. One of them reminded me of a small fragment found at Lochlee, and identified by Professor

¹ A few days before the meeting the following note was sent to me by one of the secretaries:—"The committee have resolved, in the peculiar circumstances of the case, to depart from their usual custom and print any discussion that may take place on the paper to be read next meeting by Mr. Bruce on *Dumbuck*, and I am requested to intimate that they would be pleased if you could make it convenient to be present at the meeting and take part in the discussion.

"An opportunity would be given of revising any remarks you might make before they were printed.

"By direction of the committee I am writing similar letters to other gentlemen, Fellows of the Society, who have discussed *Dumbuck* in the public press."

I was not present at the meeting owing to various reasons, some being that I had expressed my views on the Dumbuck "crannog" when Mr. Bruce read his first paper on that subject: that these views were already published: and that nothing in the interval had occurred to lead me to alter them.

Rolleston as that of the reindeer. The idea which passed through my mind at the time was that the Dumbuck fragments might also have been remains of the reindeer. I did not, however, examine them with care, as I urged the importance of sending all the animal remains without delay to be examined by an expert. Now in the selection of horns and bones sent to Dr. Traquair I could find none of the fragments previously shown to me as those of the fallow-deer. I need not say that the identification of the remains of either of these species of deer, on an inhabited site in the valley of the Clyde, would have been one of the most interesting features of the Dumbuck find. Dr. David Murray, in an article on the Dumbuck "Marine Structure,"¹ mentions fragments of "antlers of the red-deer and fallow-deer" among the contents of the refuse-heap. It may be mentioned that, during the newspaper correspondence, I made use of the reported presence of fallow-deer horns among the débris of Dumbuck as an argument against the theory that the structure belonged to the Neolithic period, because this kind of deer was first introduced into Britain by the Romans.² Remains of the fallow-deer have not, therefore, been found in older deposits than Roman kitchen remains, as at London Wall and Colchester, where Professor Boyd Dawkins recognised its characteristic antlers.³

On the chairman inviting discussion on Mr. Bruce's paper the first speaker was Dr. Joseph Anderson, who dealt in a lucid manner with the main features of the case. With regard to the relics, he said that there was nothing exceptional in the chronological horizon of a portion of them from both sites (Dumbuck and Dunbuie), but as regards another portion, he could find no place for it in

¹ *Scots Pictorial*, October 29th, 1898.

² *Glasgow Herald*, January 14th, 1899.

³ *Cave Hunting*, p. 132.

any archæological series, having "no recognisable affinity with any objects found anywhere else."

"For my part," said Dr. Anderson, "I do not consider it possible or necessary in the meantime that there should be a final pronouncement on these questions. In the absence of decisive evidence, which time may supply, I prefer to suspend my judgment—merely placing the suspected objects (as they place themselves) in the list of things that must wait for further evidence, because they contradict present experience. It has often happened that new varieties of things have been regarded with suspicion on account of their lack of correspondence with things previously known, and that the lapse of time has brought corroboration of their genuineness through fresh discoveries. If time brings no such corroboration, they still remain in their proper classification as things whose special character has not been confirmed by archæological experience."

The only other Fellow present, besides the chairman, who took part in the discussion, was Dr. David Christison, who said that the difficulty in freely accepting the objects found at Dunbuie had been increased rather than diminished by the discovery of "objects of startling novelty" at Dumbuck.

Sir Arthur Mitchell, in summing up the discussion, said that the comments passed would serve a useful purpose; nor did the fact that they were by no means all in agreement "lessen their value." The Society had no function to give a deliverance on such matters, and the Fellows could hold their own opinions. He made the following judicious and much-needed remarks on the distinction between genuineness and authenticity:—

"When quite new objects present themselves with claims to antiquity, it is certainly proper to examine those claims with care. This would be proper if there was nothing peculiar about them beyond their newness, that is, their not having been seen before; but a careful examination of them becomes still more clearly proper if there is anything about their character, in

addition to newness, raising doubts as to their genuineness. There may be little or no hesitation in accepting objects as genuine objects of antiquity, and yet some uncertainty as to their authenticity. It is, of course, a deeper doubt, which extends to genuineness as well as to authenticity."

In the present case he thought the duty of the Society was to preserve both the record and the objects till further experience would decide the matter. This experience might "be derived from fresh explorations in other localities, or from further explorations at Dumbuck itself, or from a fuller knowledge of the circumstances in which the doubted objects were found." It seemed to him that "we should, in the meantime, speak hesitatingly of the Dumbuck structure as a crannog." In connection with this point he regarded the position of the structure as of some importance.

"It is situated," he adds, "on the Clyde, at a place which was at one time a ford—not a ferry. There are indeed many references to the Dumbuck Ford. When the Clyde was deepened, great changes, we know, occurred in the region of Dumbuck, the result of dredging on a great scale, and also of river buildings, not far from the structure. There is still, I think, a guiding light at Dumbuck. It is now, if I mistake not, a gas light, but I think it was at one time a light from an open fire of flaming coal. On these matters, however, I have no certain information. But the history of Dumbuck as a ford seems to me to deserve looking into."¹

The result of the discussion was to put the Clyde disputed objects into a category of suspense. They are now placed in a case by themselves, along with the few unquestioned relics with which they were associated, where visitors to the Museum can inspect them and form their own opinions as to their archæological value. The

¹ For a full report of the discussion at the Society of Antiquaries of Scotland, see their *Proceedings*, vol. xxxiv. pp. 456 *et seq.*

publication of the discussion has also, in another way, served a good purpose by revealing to archaeologists beyond Scotland the fact that Scottish antiquaries were by no means unanimous in regarding these grotesque shale objects as genuine relics of Scottish civilisation.

Then follow replies from those invited to take part in the discussion, but who were not present.¹

Mr. Andrew Lang begins by trying to establish a similarity between some Australian things and the Clyde ornaments, and concludes his communication as follows :—

“That a forger, presumably ignorant of the recently ascertained Australian facts, was unlikely to counterfeit objects of which he could scarcely have heard. He would have forged *familiar*, not *unknown* objects. The level of Australian material culture, in any case, is infinitely below that indicated by the structure of Dumbuck.

“If genuine, the marked stones of Dumbuck and Dunbuie indicate the survival, into a relatively cultured age, of a singularly archaic set of ritual and magical ideas.”

Dr. David Murray concludes his communication as follows :—

“River cairns are commonly built on piled platforms, and my doubt is whether this is not the nature of the structure in question. It is difficult to suggest why a pile-dwelling should be placed on a spot dry for several hours every day. The so-called causeway would be under water at high and of no use at low tide. The supposed dock in which the canoe was found would be equally useless, being at one time on dry land and at another twelve feet under water. The canoe does not seem to have been associated with the structure. It is similar to other Clyde canoes, one of which was found a short distance to the east. The other finds are puzzling, but we need not condemn them because we do not understand them.”

¹ My letter to the secretary is not published, but an extract from *Pre-historic Scotland* is given in which my opinions on the subject are expressed.

OTHER OPINIONS OF THE RELICS OF DUMBUCK
AND DUNBUIE

In order to make the above sketch as representative as possible within the limits at my disposal, it is interesting to add the following opinions of some eminent authorities who took the precaution to examine the relics before pronouncing judgment on them.

A letter from the late Mr. Henry Stopes in the *Athenæum* of October 12th, 1901, affirming his belief in the genuineness of the Clyde relics, was answered in the next issue of that journal by Mr. J. Romilly Allen, F.S.A., editor of the *Reliquary and Illustrated Archæologist*, as follows :—

“I challenge Mr. H. Stopes to get any responsible museum curator to pass these as genuine antiquities of the Neolithic period. It would be an advantage to the public if some archæological Sherlock Holmes would endeavour to discover the name and address of the practical joker to whom we are indebted for having taken in so many distinguished antiquaries.”¹

Mr. Charles Hercules Read, Secretary of the Society of Antiquaries, and Keeper of the British Antiquities in the British Museum, writes in a letter, dated 7th December, 1901, as follows :—

“I did enjoy the pleasure of seeing the Dumbuck and Dunbuie ‘antiquities.’ What puzzles me is the purpose served by this curious swindle. Where does the fun come in, and who, besides people like you and me, is enjoying the joke? I met —, and he endeavoured to get me on the argument, but I declined, not having then seen the things. His line is founded on the *petitio principii*. A merely literary man cannot understand that to practised people the antiquities are as readable as print, and a good deal more accurate.”

Professor Boyd Dawkins, who has frequently expressed the opinion that the idols and the other “queer things”

¹ *Athenæum*, 19th October, 1901.

from the Clyde were spurious, had recently an opportunity of seeing the objects in the National Museum in Edinburgh; and the result of his investigation was the following letter which appeared in the *Glasgow Herald* on the 10th April, 1903:—

“OWENS COLLEGE, MANCHESTER, April 8, 1903.

“SIR,—On my way through Edinburgh last Monday I was led by the controversy in your columns as to the age of the above sites to examine the collection made from them in the National Museum of Antiquities. The collection is as a whole unique, and unlike any collection from any other archæological site in Europe. Four oyster-shells from Dunbuie particularly attracted my attention. Two worn shells belong to the common British oyster, and demand no further notice. Two fresh shells have the characteristic purple muscular impression of the American oyster, and are unmistakable Blue Points. All have one or more holes drilled in them. If these belong, as is alleged, to the age of the Dunbuie hill-fort, it is obvious that the inhabitants ate Blue Points, and that the importation of American oysters to the banks of the Clyde began before the discovery of America. It is easier to believe that the oysters in question are neither prehistoric nor mediæval, and that they found their way into the refuse-heap after the importation of American oysters to Glasgow at some time during the last thirty years.

“I am, etc.,

“W. BOYD DAWKINS.”

Considering the diversity of opinions thus held and published in archæological and scientific journals, literary magazines, and the daily press, we can hardly complain if the public saw in these investigations a suitable subject for ridicule. And yet, the two submarine structures in the estuary of the Clyde, along with the portion of the relics, of which there can be no doubt as to their being genuine, are, perhaps, the most interesting and novel discoveries of recent times within the Scottish area. But, instead of trying to interpret the social exigencies

which gave rise to such novel archæological phenomena in the Firth of Clyde, the investigators pay no attention to any opinion unless it be associated with a belief in the authenticity of the grotesque and ridiculous "idols" *et omne hoc genus*, which have so greatly startled the archæological world beyond the environments of Glasgow.

CHAPTER VI

THE ARCHÆOLOGICAL DISCOVERIES AT DUNBUIE, DUMBUCK, AND LANGBANK, INDEPENDENT OF THE DISPUTED OBJECTS

I PROPOSE in this chapter to discuss the archæological evidence which the materials, found during the excavations of the hill-fort of Dunbuie and the two submarine structures of the Clyde estuary, have placed at our disposal for forming an opinion of the age and period to which they belong, without taking the shale ornaments and other disputed objects into account. To use these latter objects as evidence for or against the conclusions thus arrived at would be a glaring case of *petitio principii*. Let no one, however, run away with the idea that they are devoid of evidential elements. On the contrary, these are so explicit and important in the general inquiry that they will be considered in a separate chapter.

(1) THE HILL-FORT OF DUNBUIE

There are no structural features in the hill-fort of Dunbuie by which it can be differentiated from numerous other stone forts in Scotland. The foundations of a nearly circular wall of dry stone masonry, $13\frac{1}{2}$ feet thick, enclosing a space 30 to 32 feet in diameter, and to which there had been an entrance a little over 3 feet wide, with indications of a guard chamber on each side, are all the architectural data disclosed by the excavation. Had any remains of intra-mural chambers or of a stone stair

been detected it would unhesitatingly be pronounced a broch; nor, in the absence of such evidence, can it be definitely dissociated from that peculiar class of Scottish buildings, because the portion of wall then remaining was not sufficiently high to exclude the possibility of these broch characteristics having been present at a higher level—a structural deviation which has occasionally been met with. Of course, had the Dunbuie fort been actually proved to be the remains of a broch, no sane person would for a moment entertain the idea that its ruins contained the débris of a Neolithic or pre-Celtic civilisation. All the brochs hitherto investigated have shown more or less precise evidence of a post-Roman civilisation, their range, according to Dr. Joseph Anderson, being “not earlier than the fifth and not later than the ninth century.”¹ Although from more recent discoveries, as, for example, the broch of Torwoodlee, Selkirkshire, there is good reason to believe that their range might legitimately be brought nearer to Roman times, it makes no difference in the correctness of the statement that they all belong to the Iron Age. But, putting the supposition that the Dunbuie fort was a broch altogether aside, and considering it as a mere circular fort or tower, it is not without parallels in the neighbourhood, as I will now endeavour to show.

On April 19th, 1892, while a local antiquary and myself were on our way to the vitrified fort of Dunskeig, in the north of Cantyre, I jotted the following notes of a ruined fort of dry stone masonry which we accidentally came upon.

The summit of Dunskeig extends some 150 yards in length from east to west, and about half that in breadth. At each end of its long diameter are the remains of an ancient fort. One, the first we came to, situated on the

¹ *Archæologia Scotica*, vol. v. p. 146.

eastern brow, looked at a little distance like a cairn of stones. Its original form was that of a circular building of dry stones enclosing an area a few paces in diameter. Portions of the inner surface of the circumscribing wall were still *in situ*. Its thickness was found to be 14 feet on the east side, where its only entrance was placed. This entrance was in the form of a passage, 4 feet 6 inches wide, but showed no evidence of a guardroom. The continuity of the wall on the inner side of the fort could be traced all round, and here also the evidence of recesses, side chambers, or stairs in the wall was of a negative character. The fort was therefore not a broch.

During the summer of 1900, while staying with friends in Argyllshire, I inspected the ruins of a circular fort situated on a precipitous knoll about half a mile north of Lunga House, and to the east of the new road to Kilmelfort, which presented similar characteristics. The portions of the wall still remaining disclosed a thickness of 14 feet, an internal diameter of 25 to 30 feet, and one entrance on the south-east side. On examining the surface of what remained of the wall I noticed one or two empty spaces in its interior which might have been the bases of chambers, but there were no indications of a stair.

I also inspected, along with Mr. David MacRitchie, F.S.A. SCOT., another roughly circular fort, on the east bank of Loch Lomond, in the vicinity of some submerged wooden structures supposed to be remains of a crannog; but the exact nature of this fort was also uncertain, as there remained of it little more than the foundations of the wall.

Dr. David Christison thus writes of a circular fort which he explored in the vicinity of Loch Awe:—

“Suidhe Chennaidh (the name of the fort) has evidently been a round tower of dry masonry, with a wall 14 feet thick at the base, and of considerable height, as proved by the amount of

débris remaining after the removal of large quantities to build a dyke. This took place in the lifetime of Mr. Macdonald's father, who could remember when the ruin stood to a height of about 20 feet. The important question whether it is a broch or not cannot be quite conclusively answered, although the evidence is negative, on the whole. No sign of a stair or gallery in the thickness of the wall, or of a doorway leading to such was found; but as the structural part remaining does not exceed 4 feet in height, the absence of these signs of a broch is not decisive; and all that Mr. Macdonald has to say as to his father's information is that he never heard him speak of stair, gallery, or window in the structure."¹

Unfortunately, the removal of the soil and grassy covering of the rocky floor of the interior of this fort yielded no relics, except the remains of some rude hearths, ashes and charcoal, and some fragmentary bones, which, so far as they could be identified, belonged to the horse, stag, and roe.

An exceptionally interesting fort of dry masonry, on the island of Luing, has been partially explored and described by Dr. Allan Macnaughton.² This fort is oval in shape, measuring about 66 by 40 feet (internal diameter), and the thickness of the wall varies from 16 feet, at its ends, to 10 feet in the middle. It had two entrances, one a simple passage, and the other, though smaller, gave access to a chamber and a stair in the interior of the wall leading upwards. The larger entrance, 14 feet long by 5½ feet wide, had two door-posts, on one of which (the surface facing the interior) were fifteen cup-marks, measuring from 1 to 2 inches in diameter and ½ inch in depth. The relics found in the course of the investigations are the following—the description being slightly abbreviated from that in the *Proceedings* of the Society:—

Four water-rolled pebbles of quartzite and mica schist,

¹ *Proc. S. A. Scot.*, vol. xxv. p. 122.

² *Ibid.*, xxv. p. 476; xxviii. p. 375.

from 5 to $3\frac{1}{2}$ inches in length, and abraded at their ends for use as hammer-stones.

An oval pebble of quartzite (*tracked stone*), $3\frac{3}{4}$ inches in length by $2\frac{3}{4}$ inches in breadth and 1 inch in thickness, having a narrow groove formed along its major axis on both sides, shallower towards the ends than in the middle (Fig. 33).

"Small quern of slate, upper and lower stones 5 inches in diameter. These small querns have been occasionally styled snuff or mustard querns, but in either case the



FIG. 33. TRACKED STONE FROM LUING FORT ($\frac{1}{2}$)

use of them for this purpose would be comparatively modern."

A large quern of slate, 2 feet 8 inches in diameter.

Part of an iron blade, probably a knife or dirk, $1\frac{1}{2}$ inch in length. Two pieces of iron slag, one of them magnetic.

Portion of a small rod, or pin, of brass or bronze, not unlike the slender handle of a mediæval spoon, having at one end a piece of thinner metal attached.

A fragment of coarse pottery, a slab of sandstone, $8\frac{1}{2}$ inches square and 1 inch thick, showing on both sides marks of usage, fragments of discs and pounders and much-charred wood.

During the excavations quantities of the shells of edible

molluscs, chiefly limpets, whelks (*Littorina littorea*), and, less abundantly, oysters, were met with. The animals represented by the bones were the red-deer, roe, pig, ox, seal, and some undetermined birds.

The small quern was found at the north-east corner of the fort, near the surface. Thus, both its position in the débris, and its function of grinding snuff, though now a forgotten custom, suggest that the fort had been inhabited up to comparatively recent times. Why the investigation of this interesting ruin had been abandoned seems unaccountable in face of the following remarks :—

“When it is remembered,” writes Dr. Macnaughton, “that the fort interior is filled with débris to a height of 8 or 9 feet, one cannot but consider that in this great mass there may lie much that is certain to be of interest. The work hitherto done at the fort is but a mere fraction of what is required in order to ascertain its true character and something also about its builders and occupants. Resembling the brochs in its thick and massive walls of dry-stone, its stairs, its chambers, its contents, yet differing from them in its great size, its oval shape, and its two entrances, it forms an archæological puzzle which only extensive excavation can help to solve.”

So far, therefore, as structure gives any indications of antiquity the simple round towers must be regarded as mere variants of the broch, probably of later date than the earliest brochs. At any rate there is nothing to justify us in assigning any of them to a pre-Broch period.

Looking now at the ordinary relics collected in the débris of Dunbuie, viz. a few pointed objects of bone, two upper stones of quern-mills, some abraded pebbles, pounders, rubbers, whetstones, etc., we see that they are quite in harmony with the remains found on analogous structures and on contemporary inhabited sites, such as the crannogs. The absence of pottery and metal is by

no means an unusual circumstance among the Scottish forts hitherto explored. Out of some ten forts examined, pottery was found on five sites, viz. Dun Fheurain, Castle Law, the Laws, Seamill, and Abernethy, amounting to four fragments on three and a few more on Castle Law and Abernethy. On the Lochlee crannog, notwithstanding its richness in industrial and domestic relics, only five small portions of a whitish, unglazed ware, with circular striæ as if made on the wheel, were found—all of which might have been portions of the same vessel. Metal objects were equally restricted in number, and their distribution among these ten forts was confined to a few. To argue, therefore, from the absence of metal and pottery at Dunbuie, that the site is Neolithic, as thus set forth in the article on that fort in the *Proceedings* of the Society of Antiquaries of Scotland, is simply fatuous:—

“The articles found are strongly indicative of a much earlier period than post-Roman—they point to an occupation of a tribe in their Stone Age. For although the absence of metal is not in itself sufficient to infer a Stone Age, when we find so many weapons, cutting implements, and personal ornaments of stone, and none of bronze or iron or any other metal, we have presumptive evidence that this tribe had not acquired the everyday use of metals; the total absence of pottery is another evidence of a very early stage of civilisation.”¹

(2) DUMBUCK SUBMARINE STRUCTURE

In criticising Mr. John Bruce's first report of the excavations at Dumbuck to the Society of Antiquaries of Scotland (May 8th, 1899), I maintained, on the following grounds, that the structure was a relic of the Iron Age. First, that the woodwork showed unquestionable evidence of having been cut and shaped with sharp metal tools; secondly, that its superficial position in the sedimentary

¹ *Proc. S. A. Scot.*, vol. xxx. p. 307.

deposits of the Clyde basin was inconsistent with the idea that its construction dated back to the Neolithic period; and thirdly, that all the genuine relics discovered up to that time belonged to post-Roman times.

With regard to the implements and tools with which the piles and other woodwork were cut and shaped, it is now generally admitted that they were made of metal, probably iron.¹ It is therefore unnecessary to say anything more on this subject.

From the geological point of view the Neolithic theory of Dumbuck is equally untenable. To look for Stone Age remains, such as flint implements, arrow-heads, etc., one does not go to recent deposits on the present sea-beach, but to those which were formed in prehistoric ages. On the supposition that a crannog, or any analogous habitation, had been constructed in that remote period near the line of low-water mark, its site would be now, doubtless, a long way inland and buried some 8 to 12 feet beneath the accumulated silt, probably long ere now converted into arable land. The early Iron Age relics found when excavating Kingston Dock were buried 15 feet below the surface (see p. 230). The alluvial deposits which have accumulated during and since Neolithic times in the shallows of the Clyde estuary have greatly encroached on the water-course; but the increase of mud around the wooden structure at Dumbuck since it was laid down is only equal to the thickness of the three layers of wood—probably less than a foot in depth. The superficiality of the so-called stone pavements, one of which is described by Mr. Bruce as “6 feet wide and just awash with the mud,” shows the absurdity of the Neolithic contention. I have elsewhere suggested that some of these causeways may have been laid when the cairn was being demolished (see p. 139); and the extension of one from

¹ See p. 219; and *Reliquary and Illustrated Archæologist*, vol. vii. p. 118.

the central woodwork to the burn, or artificial canal, supports the probability of this suggestion.

Among the "objects of types which are familiarly known to archæological science from their frequent occurrence in other sites of early occupation," are two which have a special chronological value, viz. an understone of a quern and a "tracked stone" (Fig. 34). Both these objects are characteristic of the early Iron Age, no specimen of either having been found, to my knowledge, in any remains belonging to the previous ages.

The quern is an ingeniously constructed machine, the use of which implies a considerable advance in mechanical



FIG. 34. TRACKED STONE FROM DUMBUCK ($\frac{1}{2}$)

skill. It appears to have been first used in France during the later Marnian, or La Tène, period ("Late Celtic" of the British Isles). It is the immediate successor to the "saddle quern," which consisted of two flat stones, the upper being used to crush the grain by a rolling or rubbing process. Such were the millstones found by Schliemann in hundreds in the strata of all the prehistoric cities of Hissarlik. They were also common among the débris of the Swiss lake-dwellings; but no rotatory quern has been found, to my knowledge, in any Neolithic or Bronze Age station in Europe. The oldest known querns in Britain are those found in Glastonbury lake-village, and in Hunsbury Camp, near Northampton; but the examples from both these sites can scarcely be dis-

tinguished from those found on Roman stations. The Romans may be said to have been the introducers of the quern into North Britain; but who were its actual inventors seems to be unknown. The mention of stones "millstone-like" by Homer¹ only proves that corn was ground between stones of a particular size, which therefore might have been saddle querns.

The "tracked stone" (Fig. 34), whatever may have been its special function or purpose, whether a point-sharpener, as many maintain, or a strike-a-light, is equally good evidence that the people who used such things flourished in the Iron Age, as none of them have been found in any of the previous ages. They are not very common in Scotland, this being the ninth specimen known to me, viz. four from Wigtownshire,² one from the Borness Cave, Kirkcudbrightshire,³ one from each of the brochs of Lingrow (Orkney), and Kintradwell (Sutherlandshire), and one from the south fort of Luing (Fig. 33), as already described. In Ireland, however, they are more common, being occasionally among the relics on crannog sites, no less than ten specimens associated with numerous iron implements and objects of mediæval times having been found on the crannog of Moylurg, co. Antrim.⁴

In Scandinavia and Finland these objects were often manufactured with much care, generally in the form of a pointed oval with a groove along the margin for the attachment of a leathern strap, by means of which a warrior could carry one suspended from his belt. They are, however, also found as simple oval pebbles, precisely like the Scottish and Irish specimens. One of this kind is figured on Plate III. (p. 428) of the Bologna volume of the *Congrès International d'Anthropologie et d'Archéologie préhistoriques*, 1871.

¹ *Iliad*, vii. 270.

² *Catalogue of National Museum*, AL. Nos. 83-6.

³ *Proc. S. A. Scot.*, vol. x. p. 492.

⁴ *Journal of the Royal Society of Antiquaries of Ireland*, vol. xxiv. p. 326.

As to their function, my own opinion is that they were used as strike-a-lights. The central groove, often slanting a little to one side, was intended to guide the direction of a piece of flint which, when held in the right hand—the tracked pebble being in the left—and struck smartly, produced sparks of fire. But even on the supposition that they were point-sharpeners—and I see no reason why they should not have been used for both purposes—they could only be effectually used to sharpen pointed tools and instruments of metal.

All the other relics (except, of course, the disputed objects) such as the bone pointers, the sawn and cut portions of deer-horn, the hammer-stones, whetstones, abraded water-worn pebbles, etc., are just what one would expect to find in the débris of an inhabited site of early mediæval times.

Among the animal bones found in the refuse-heap was a tooth of the horse, which shows that this animal was then used as food. Now horseflesh was forbidden by the Church as an article of food in the latter part of the eighth century, because it was eaten by the Scandinavian people in honour of Odin. It would appear, however, that the deeply rooted prejudice against the use of this animal as a source of human food, which prevails at the present day, was only gradually acquired, as it is recorded that the monks of St. Gall ate the flesh of wild horses in the eleventh century. At any rate, the presence of remains of the horse among the food refuse left by the occupiers of the Dumbuck submarine structure is good presumptive evidence that the date of its occupation was not later than the tenth or twelfth century. It would be interesting to know if there are any historical notices extant to show when the horse ceased to be used as food for man in North Britain.

I venture to say that no experienced archæologist will

all times heretofore, and still are at some seasons of the year chiefly maintained by the fishings thereof 'none fish' according to the ancient custome [*i.e.* with *cruives* and *yairs*] except the natives' (*Acts Parl. Scot.*, vol v. p. 245).

"*Yairs* were the subject of legislation in Scotland since the days of William the Lion, and were the frequent cause of litigation in the law courts from the thirteenth century to the beginning of the nineteenth century.

"But besides *cruives* and *yairs* there is reference in the old charters to houses and shielings for the fishermen, and in one case to a bothy, which served both as a house for preserving the fish and for providing accommodation to the fishermen when detained in their fishing operations. The earliest reference of this kind is in the *Donatio et confirmatio Maldoveni Comitis de Levenax, Terre et Piscarie de Lynbren*, date 1255. By this donation Maldoven, Earl of Lennox, besides granting to the Paisley monks certain lands and privileges in the Vale of Leven, also gave them permission to fish both sides of the Leven, and over the water as they pleased. It further conferred the right 'to fish his lake of Leven, in its whole extent, with the liberty of drying their nets and making houses and shielings for their fishermen as well in the islands of the said lake as in his adjacent lands' ('*cum libertate siccandi retia sua et faciendi domos et scalingas piscatoribus suis tam in insulis predicti lacus quam in terris meis circumjacentibus.*'—*Reg. Mon. de Pass.*, p. 212).

"Another very important reference is in the charter, entitled *Carta de Piscarie de le Crukyshot*, granted by Robert, Lord Lyle, to the monks of Paisley, in 1452. This charter bestowed upon them and their successors the third part of the entire fishing of Crookedshot on the Clyde belonging to his lands of Auchentorlie and Dunnerbuck, 'with a small piece of land touching upon and in the neighbourhood of the aforesaid third part of the fishing of Crookedshot for the purpose of erecting a house suitable for the preservation of the fish and for the use of the servants of the said Abbey and Convent when detained in that place' ('*cum particula terre contigua et vicina prefate terti parti piscarie le Crukytshot ad construendum unam domum sufficientum pro conservatione piscium et pro servitoribus*

inibi moram trahentibus dictorum Abbatis et Conventus qui pro tempore fuerint.'—*Reg. Mon. de Pass.*, p. 250).

"The lands of Auchentorlie and Dunnerbuck are about half a mile distant from the wooden site at Dumbuck.

"Mr. John Bruce, F.S.A. SCOT., in a paper on the Dumbuck structure, read before the Society of Antiquaries of Scotland, and published in their *Transactions* (vol. xxxiv. p. 438), states that 'in the centre there is a circular stone-walled cavity of about six feet diameter, inside of which were found remains of what seemed like wattle or basket-work of hazel twigs and rods.' This find of wattle or basket-work, taken along with the fact that it was customary from early times to erect houses on or near the Clyde for the preservation of the fish and the temporary shelter of the fishermen, seems to point to the almost inevitable conclusion that the so-called Dumbuck crannog is the site of an old fish-bothy. As a crannog on the Clyde margin it would be of no use either as a permanent habitation or place of defence, since it would be left high and dry at each ebb of the tide. As a fish-bothy with its central cavity—possibly utilised for preserving the fish alive—it would not only be in the most suitable place for such a purpose, but it would readily explain the hitherto inexplicable questions that have been raised as to its situation, and origin, and use."

(3) THE SUBMARINE STRUCTURE AT LANGBANK

Just as the Clyde controversy was becoming stale in local and quasi-archæological circles, the announcement of the discovery of another "crannog" on the Clyde estuary added a fresh element of expectancy to those who had interested themselves in the difficulties raised by the novel revelations of Dunbuie and Dumbuck. As regards function and date of occupancy, as indicated by the superficial position and general arrangement of the wood-work, there can be no doubt that the chronological horizon of this new site corresponds with that of Dumbuck. Its chief and almost only relics—the bone comb with Late Celtic ornamentation and the small brooch of

brass or bronze (Plate XII.)—are also in harmony with the post-Roman date of construction previously assigned to Dumbuck and Dunbuie, and having a possible range of from 400 to 1200 A.D. But while in the two former stations there was not a single object which suggested



FIG. 35. BONE COMB FOUND ON GHEGAN ROCK AND OBJECTS ASSOCIATED WITH IT (†)

a more definite position within that range, we have in these two exceptionally interesting relics presumptive evidence to fix the date of the occupancy of Langbank probably nearer the distal than the proximal end of the above-named range. As this question is by far the most interesting which the Clyde investigations have yet brought

on the field of discussion, we shall, as briefly as possible, look into its merits. First as to the comb. A comb (Fig. 35), ornamented with a Late Celtic pattern very similar to that on the Langbank specimen, was found among the ruins of a Romano-British habitation on the "Ghegan Rock," East Lothian.¹ Ornamental toilet combs have also been found on the sites of brochs, crannogs, kitchen middens, etc., of early mediæval times both in Scotland and Ireland.² The ornamentation on one of the combs found on the kitchen midden at Elie,³ a site of about the eighth century, may also be regarded as a Late Celtic design, as I have observed the very same pattern on pottery from the lake-village of Glastonbury. It consists of a circle enclosing two circles, each having a diameter of half that of the former, precisely as is the case with the Ghegan specimen, except that in the latter instead of perfect circles we have slight ovals.

The ornamental design on the Langbank comb has, therefore, justly excited the curiosity of archæologists; and, there being little known of the duration of the "Late Celtic" period in North Britain, it is not a matter of surprise to find one critic, Mr. Ludovic Maclellan Mann,⁴ arguing that this design proves the Langbank habitation to have been constructed in pre-Roman times. His argument is as follows. From Sir W. Franks' well-known opinion on the duration of the "Late Celtic" period in South Britain (200 B.C. to about 100 A.D.), Mr. Mann maintains that the range of time for the Langbank comb "may be taken with safety as from 100 B.C. to 250 A.D." Again, in comparing its design with that

¹ *Proc. S. A. Scot.*, vol. viii. p. 375.

² See *Ancient Scottish Lake-dwellings*, Figs. 217, 218, 219, and 255 to 259.

³ *Proc. S. A. Scot.*, vol. xxxv. p. 286.

⁴ *Glasgow Herald*, December 12th, 1902.

on the analogous comb from the Ghegan Rock (Fig. 35), he writes :—

“It is understood that the archæological horizon to which the Ghegan specimen has been assigned has been taken by some inquirers as a guide to the age of the Langbank specimen. It is, therefore, of importance to show, as can easily be done, that the curvilinear incised work on the Ghegan comb is of a later type. In the Ghegan specimen the lines are unpleasing, without grace, and comprise stiff geometrical ovals, the whole design being degenerate and having little or no likeness to the Late Celtic patterns.”

From the result of my own examination of the two combs I do not agree with Mr. Mann's criticism. Indeed, were a distinction to be made in curves made by a pair of compasses, I would be inclined to reverse his judgment, as a geometrical oval is more difficult in execution than a circle inscribed (excentrically) within another. Mr. Mann's next point is that from the entire absence of pottery and Roman remains “we are driven to the conclusion that the site was not a ‘going concern’ during those Roman perturbed centuries.” So far his argument is legitimate and to the point, the most questionable element in the evidence being his reasons for assigning the Ghegan comb to a later period (a point which will be discussed further on). It is, however, to the inference he draws from faulty premises that I wish specially to direct attention. “We have now shown,” he writes, “that the site is not later than the Roman period. Hence it may be taken to be pre-Roman in origin.” Our author concludes his letter as follows :—

“Whether, in attempting to fix this archæological Enigma of Renfrewshire in its proper chronological place, we may dare venture beyond the few short Early Iron Age centuries, and consider, as a possible arena, the period of the Bronze Age Culture, with its several instances of appreciation of cup-and-

ring marked slabs, is a question I leave to more capable inquirers."

As one of the professed objects for which this book was undertaken is to expose archæological fallacies it will be necessary to deal with Mr. Mann's arguments systematically, because they are plausible, and might even induce persons not fully conversant with Late Celtic remains to accept his pre-Roman theory of the Langbank structure, as a conclusion founded on archæological facts.

First of all let me remind readers that Late Celtic art is not a creation of the people of Britain, but a mere adaptation of art elements imported from Central Europe, a statement which I have elsewhere fully dealt with in an article on the "civilisations of Hallstatt and La Tène."¹ But these foreign elements were so handled by the Celts of the British Isles that their work can be readily differentiated from that of any other European people, whose culture elements were derived from the same classical sources. Before the conquest of Britain by the Romans, Late Celtic art was practised by the inhabitants in several parts of Britain, without showing any trace of Roman influence, such as in the Glastonbury lake-village and the Hunsbury Camp, near Northampton. Numerous examples of this art have also been discovered throughout the English provinces in graves, hoards, rivers, fields, etc., generally as isolated finds, but occasionally associated with Roman remains. In Scotland, however, there is not a single specimen which, so far as I know, can be dated to pre-Roman times. No doubt the circumstances in which many of these Late Celtic objects have been found afford no clue to their date, but, on the other hand, there are others which, being associated with undoubted works of Roman art, must of necessity be assigned to the Romano-British period.

¹ *Rambles and Studies in Bosnia, etc.*, chap xi., 2nd ed.

Thus, of the massive bronze bracelets peculiar to Scotland, one, found at Stanhope, Peeblesshire, had been concealed under a stone, along with a Roman patella, or pan, very like the one found on a crannog in Dowalton Loch. Another was disinterred from the entrance to an underground dwelling (Eirde- or Picts' house) at Castle Newe, Strathdon, Aberdeenshire, and among the débris of this dwelling were "parts of querns, antique beads, etc." Another fact about these Caledonian bracelets, which suggests their post-Roman origin, is that an analysis of the metal of some of them showed that zinc as an alloy had partly taken the place of tin, a change in the composition of true bronze which had been brought about in Roman times.¹ In draining a bog near the manse of Balmaclellan, Kircudbrightshire, four parcels of bronze objects, including fragments of a mirror, with characteristic ornaments of Late Celtic designs, were found along with a highly ornamented upper quern stone.² A circular brooch of bronze with an exquisite pattern of flamboyant and spiral work in relief was found in the Victoria Cave, Yorkshire, along with coins of the first half of the fifth century of the Christian era.³

That these Romano-British examples of Late Celtic work are not exceptional survivals is proved from the discovery of similar work associated with Anglo-Saxon remains. Mr. Llewellyn Jewitt⁴ wrote as follows:—

"A remarkable discovery, which included portions of what is very plausibly considered to be a helmet, was also, a few years ago, made on the estate of Mr. Francis Wedgwood, at Barlaston, in Staffordshire. The particulars of this I now for the first time make public. The grave, which was 7 feet in length by 2 feet in width, was cut in the solid red sandstone rock. It was about 15 inches in depth at the deepest part,

¹ *Proc. S. A. Scot.*, xv. p. 356.

² *Ibid.*, vol. iv. p. 294.

³ *Cave Hunting*, p. 93.

⁴ *Grave Mounds*, p. 258.

which was at the south-east corner, and died out with the slope of the hill towards the north-west, and the earth which covered it (which had probably been tempered in the usual manner) was only a few inches in thickness. It was on the slope of the hill. At the upper or northerly end of the grave a basin-like cavity,



FIG. 36. BRONZE PLAQUE FROM AN ANGLO-SAXON GRAVE
AT BARLASTON (†)

two or three inches in depth, was cut in the floor of rock. In this hollow, which had evidently been intended for the helmeted head of the deceased to rest in, was found the remains of what I have alluded to as justly considered to be remains of a bronze helmet. The skeleton had, as is so frequently the case in Anglo-Saxon interments, entirely disappeared, but on its right side lay the sword, and on the left a knife.

"The fragments in the cavity consisted of several pieces of curved bronze, highly ornamented, which had probably, with other plain curved pieces, formed the framework of the helmet; some thin plates of bronze; a flat ring of bronze, beautifully

ornamented, which is conjectured to have been the top of the framework of the helmet; and three enamelled discs, of a similar character to what have been elsewhere found, with hooks for suspension, or attachment to leather or other substance. One of these is engraved, of its real size, on the next illustration (Fig. 36). The centre is of enamel mosaic work, ground down level with the metal, as in the old Chinese enamels. . . .

“Enamelled discs, or pendants, such as I have just spoken of, have been occasionally found in other localities, as will have



FIG. 37. A BRONZE PLAQUE FROM A BARROW AT MIDDLETON MOOR, DERBYSHIRE ($\frac{1}{2}$)

been noticed in the course of the last few pages. The use of these curious objects is very obscure, and I am not aware that any very particular attention has been paid to them. Portions of these were found in the Benty Grange barrow, along with the Saxon helmet. A very perfect example (Fig. 37) was found in a barrow on Middleton Moor, Derbyshire, in

1788,¹ where it was found lying near the shoulder. In the same barrow was a portion of another enamelled ornament, the iron umbone of a shield, and a thin vessel of bronze—described as like a shallow basin—which probably formed a portion of a helmet.”

I presume no one will dispute that these ornamental discs from Barlaston and Middleton Moor are Late Celtic work, and that their association with Anglo-Saxon remains brings their date down to at least the fifth or sixth century A.D.

A few years ago a remarkable discovery—consisting of two Late Celtic fibulæ of gilt bronze, a silver collar, a Roman finger ring of gold, and another of bronze with the setting of a gnostic gem—was made at Æsica on Hadrian's wall. The objects were lying together in the débris of a guard chamber, about $3\frac{1}{2}$ feet below the surface and 3 feet from the original floor of the chamber. Dr. Arthur Evans² on various grounds has fixed their date at 200 A.D. ; but this is regarded by some authorities to be too early, as it is difficult to believe that the guard chamber of a gate on the Roman wall would be a final ruin at the end of the second century. The same author, in his descriptive account of the famous gold ornaments found on the north-west coast of Ireland, assigns a hollow collar of Late Celtic workmanship, in its purest geometrical style, to the first century of our era.³ But, on the other hand, Mr. Robert Cochrane, F.S.A., in a recent communication to the *Journal of the Royal Society of Antiquaries of Ireland*,⁴ advances plausible reasons for regarding these ornaments as the property of an early Christian Church which existed near the spot, and “which, probably, suffered the usual fate of monasteries in Ireland at the hands of the Danes.”

¹ See Bateman's *Vestiges, etc.*, p. 24.

² *Archæologia*, vol. lv. pp. 179-98.

³ *Ibid.*, pp. 397-418.

⁴ Vol. xxxii. pp. 211-24.

Still more interesting are the facts in connection with the discoveries on Lisnacrogghera Crannog in Ireland,¹ where the military kits of at least four men—iron swords, bronze sheaths, lances, and their bronze handle-mountings, and other objects—all beautifully ornamented with Late Celtic designs,² were by some unknown fate associated in a peat bog with the usual promiscuous objects found on an Irish crannog. Among the latter were fragments of two large iron caldrons; a large knife, like that of a hedge-cutter, and an ordinary axe-head, both of which retained portions of their wooden handles; an iron adze; a reaping-hook; part of a gun-lock; portion of “bog-butter” bearing the impress of a coarse cloth, etc.

In 1865 a remarkable discovery was made in one of the chambered cairns on the Loughcrew hills, co. Meath, Ireland.³ This consisted of a large quantity of flat polished pieces of bone associated with a variety of objects of stone, bronze, and iron, together with a quantity of sea-shells, principally limpets and cockles; over one hundred small stone pebbles; 6 polished stone balls; beads of glass and amber as well as fragments of glass; small rings of bronze more or less perfect; 7 specimens of iron objects, all thickly encrusted with rust, among them being a pair of small compasses and a slender chisel. But it is with the bone plaques that we are now concerned, of which Mr. Conwell gives the following account:—

“We have been enabled to save 4,071 fragments of these in a plain state—once polished, but without further ornamentation; 108 nearly perfect in shape; 60 where the bone material is little decomposed, and still retains the original polish; 27 frag-

¹ *Lake-dwellings of Europe*, p. 379.

² *Ibid.*, Figs. 123 and 124.

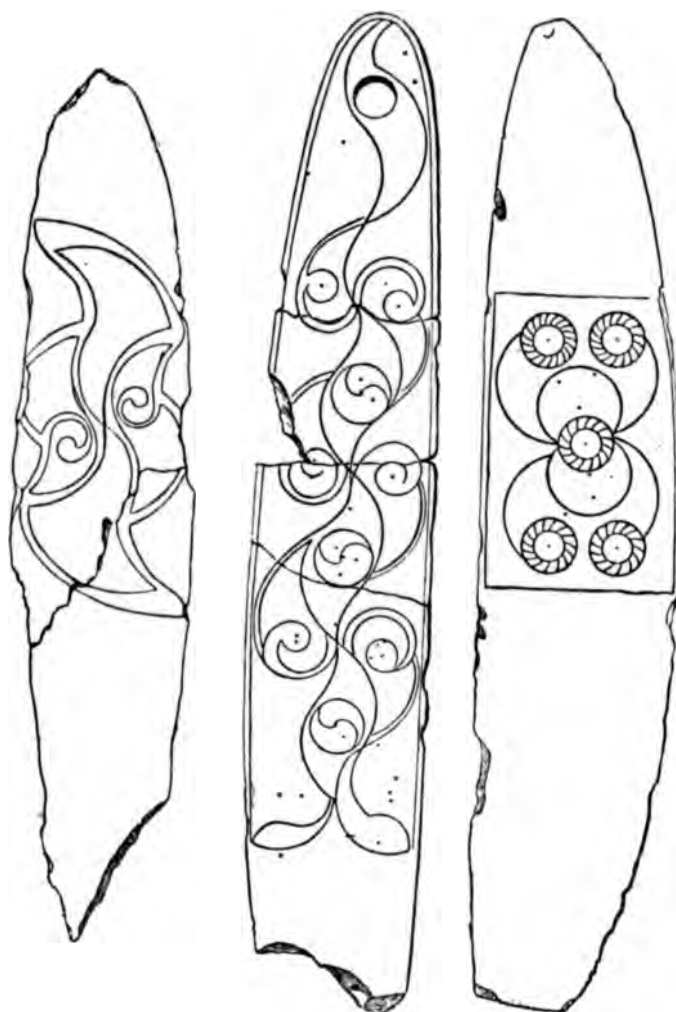
³ See *Tomb of Ollamh Fodhla*, by E. A. Conwell, M.R.I.A.

ments which appear to have been stained ; 12 plain fragments perforated by a single hole near the end ; 500 fragments ornamented with rows of fine parallel transverse lines, and two others similarly ornamented, and perforated near the end ; 13 combs, 7 of which are engraved on both sides, the heads only and the roots of the teeth of the combs now remaining ; 91 implements engraved by compass, and in a very high order of art, with circles, curves, ornamental puncturings, etc., and 12 of these decorated on both sides. In some instances the perforations near the end appear to have been counter-sunk. In all there are 4,884 pieces."¹

I here reproduce from Mr. Conwell's work a few illustrations of these ornamented bones (Figs. 38-44), from which it will be seen that we have precise parallels, not only to the ornamentation on the Langbank and Ghegan combs, but also to that on the bronze sword-sheaths of Lisnacrogghera. The late Mr. Wakeman, apparently accepting the bone ornaments of Loughcrew as being contemporary with the cairn in which they were found, tried to reconcile the conflicting facts as follows :—

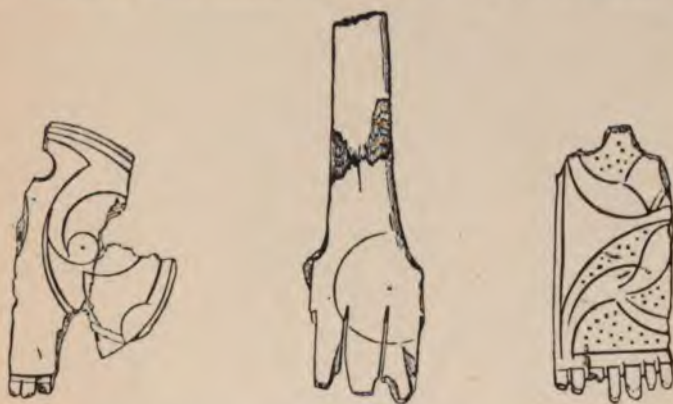
"In connection with the style of the decoration which the Lisnacrogghera sheaths and some other metallic remains found with them exhibit, all I shall now venture to say is, that it is very early—older by far than any period to which writers have allowed an iron culture, however overlapped or overlapping, to have prevailed in Ireland. It will be perfectly startling to antiquaries to compare the ornamentation on these sheaths of enamelled bronze (one of them still containing its blade of iron) with that which is shown upon a number of knife or dagger-shaped objects formed of bone, which are described by the late Mr. Conwell in his work entitled *The Tomb of Ollamb Fodhla*, as having been found in a chambered cairn on Slieve na Calliagh, one of the Lochcrew hills. This cairn formed but one of a group of tumuli, the chambers of which contained indisputable evidence of pagan sepulchral rites, including cremation, having been practised within them. It may

¹ *Ibid.*, p. 53.



FIGS. 38-40. BONES WITH LATE CELTIC ORNAMENTATION
FROM LOUGHCREW (†)

be observed on the Lochcrew implements the great majority of the spiral and other designs appear to have been produced by the aid of a compass, a slight depression or dot remaining in the centre of each curve. This dot or spot was no doubt caused by the impression of the stationary leg of the instrument used in the production of the figure; and it is curiously remarkable that similar dots form the centres of most of the beautiful arcs which appear upon the largest of the Lisnacrog-



FIGS. 41-43. FRAGMENTS OF BONE COMBS WITH LATE CELTIC ORNAMENTATION FROM LOUGHCREW (!)

hera sheaths. It is a fact most suggestive to all who have formed, or who are forming, opinions in reference to the supposed chronological order of our antiquarian waifs, that imbedded amongst the decorated bones found in the Loughcrew chamber a small compass composed of iron, and every way suitable for the production of the chaste designs which a considerable number of them exhibit was discovered. Let it not for one moment be imagined that I am desirous of claiming for the bronze crannog sheaths a degree of antiquity which must be assigned to the knife-shaped articles of bone discovered in a pagan burial chamber of the period of cremation, as has been just noted; but as an observer and student of early decorative design, I fearlessly state that the art exhibited upon the bone

remains is absolutely identical with that which appears upon the metal."¹

A more rational explanation of the chronological problem, which so greatly puzzled Mr. Wakeman, would be to bring forward the date of the Loughcrew bone ornaments, so as to harmonise it with that of the bronze sheaths of Lisnacroghera. To accept the former as products of the art of the period when the pagan cemetery on the Loughcrew hills was actually in use seems to me untenable. As already mentioned, the



FIG. 44. LATE CELTIC ORNAMENT ON BONE PLAQUE
FROM LOUGHCREW (1)

elements of Late Celtic art were not derived from the Bronze Age decorations prevalent in the British Isles, of which characteristic specimens are to be seen sculptured on nearly all the large stones which enter into the construction of the chambers of the Loughcrew cairns. These sculpturings, although disclosing a great variety of designs, are rude and roughly executed; nor is there any evolutionary connection between them and the Late

¹ *Journal R.H.A.A.*, 1884, p. 381.

Celtic bone ornaments. The only data which, so far as I can see, might suggest such a development are the concentric circles and spirals of the Bronze Age which reached Western Europe before the art influences of Hallstatt or La Tène. Although both spirals and concentric circles are the most common ornaments on bronze objects within the Scandinavia archæological area, yet we do not find that they ever evolved or merged into a style of art comparable to that of Late Celtic. Whatever Late Celtic elements existed there came from foreign sources, but not by the Danubian valley route. It is, therefore, in my opinion, more likely that a Celtic craftsman in later times deposited his stock of bone flakes and working appliances in the cairn as a secure place of concealment; or, perhaps, he had taken shelter there himself with his goods, and actually carried on his trade in the chamber. But, be that as it may, I entirely agree with Mr. Wakeman in regarding the art of the Loughcrew bone ornaments as identical with that on metal from the Lisnacroghera crannog; and, as there is no reason whatever for suggesting a pre-Roman date to the latter, the obvious inference is that the former are also later than the beginning of the Roman occupation of Britain.

The interference of Roman civilisation with the continued development of Late Celtic art in the south of Britain does not apply to Ireland, or to the north of Scotland. Hence, the Celts in these regions continued their peculiar patterns of divergent spirals and trumpet-shaped spaces, long after it ceased in the districts which came permanently under Roman government. In concluding a review of Late Celtic remains in Scotland a few years ago, I formulated the following deductions to which I still adhere :—

- (1) "The presence of querns and long-handled combs in the Glastonbury lake-village and in the Hunsbury camp, associated

with the débris of continued occupancy in which no characteristic Roman remains are found, points to a pre-Roman civilisation probably due to an immigration of Belgic or Gaulish tribes.

(2) "Such relics (querns and long-handled combs) are found in crannogs and brochs in North Britain associated with sporadic remains of both Late Celtic and Roman civilisations, thus indicating a later or post-Roman date.

(3) "Objects characteristic of the Late Celtic civilisation in Southern Britain, such as enamelled horse-trappings, articles of military equipments, mirrors, brooches, bracelets, and torques, are but sparingly found in Scotland and Ireland. And as no settlements or cemeteries of the period have been found in Britain farther north than Yorkshire, nor in any part of Ireland, it is suggested that the products of this special culture and civilisation spread to these regions by means of commercial and social intercourse, rather than by an immigration of a new race."¹

There are no archæological data, that I know of, which militate against the idea that Late Celtic art continued to be practised, both in Scotland and Ireland, until its designs were assimilated by the early Christians, and actually became part of the ornamentation used by them in the adornment of illuminated manuscripts, sculptured stones, and metal-work. If the execution of Late Celtic designs is to be restricted to a couple of centuries before, and after, the Christian era, how is the reintroduction of divergent spirals and trumpet-shaped spaces into the art of our early Christian monuments to be accounted for? Without enlarging on the subject it seems to me most reasonable to suppose that the Celtic mind eliminated the divergent spiral pattern from the various art elements which reached them from Central Europe, while at the same time it rejected zoomorphic and foliaceous designs as unattractive. The introduction of Christianity brought with it interlacements and fretwork which, in conjunction

¹ *Prehistoric Scotland*, p. 277.

with the pre-existent divergent spirals and trumpet-shaped spaces, formed the main elements in the Celtic school of Christian art both in Scotland and in Ireland up to about the tenth century, when, it would appear, the latter fell into disuse. Interlacements of a highly complex character continued, however, to be venerated for a couple of centuries longer, when they, also, succumbed to new ideas and innovations both in church architecture and Christian symbolism.

On the other hand, South Britain, having lost its native Celtic art during the Roman occupation, had to borrow it in Christian times from Scotland and Ireland, a fact which Mr. J. Romilly Allen thus records :—

“Spiral work is almost unknown on the early Christian monuments of England and Wales, being found in its greatest perfection on the sculptured stone work and metal work of Ireland and Scotland, and in the Hiberno-Saxon MSS. of the best period, say from A.D. 600 to 900.”¹

The chronology of Late Celtic art thus raised deserves more consideration than can be given to it here ; but, from incidental references recently made to it by one or two archæologists, it would appear that I am not alone in bringing down Late Celtic work in Scotland and Ireland, so as to cover the entire period between its development in South Britain and the introduction of Christianity into the British Isles. Thus Mr. Romilly Allen has contributed to the Society of Antiquaries of London,² an elaborate and well-illustrated paper on “Metal Bowls of the Late Celtic and Anglo-Saxon Periods,” the express object of which is to show “that they supply a connected link between the flamboyant ornament of the Pagan Celtic metal-work and the spiral ornament of the Christian Celtic MSS. and sculptured stones.” In this paper he

¹ *Early Christian Monuments of Scotland*, p. 374.

² *Archæologia*, vol. 56, p. 39.

figures the circular enamelled discs described by Mr. Ll. Jewitt (see p. 200) as bowl ornaments. More recently the same author describes the special characteristics of the Late Celtic art of this transition period as follows:—

“Towards the end of the ‘Late Celtic’ period and the beginning of the Christian period we find the flamboyant curves arranged symmetrically within circles, as on the Elveden tankard belonging to Mr. H. Prigg and on round disc brooches from the caves of Settle, in Yorkshire, Brough Castle, in Westmorland, Silchester, and elsewhere ; but without any closely coiled spirals being introduced.”¹

Dr. Arthur Evans, in his article on the Irish “Gold Ornaments,” already referred to, thus expresses himself:—

“There is, then, good warrant for believing that a bold, pure style of Late Celtic art was prolonged awhile among the Celtic population of the north and west of our islands after the Roman conquest of Southern Britain. In other words, the stage of culture which, shortly after the beginning of our era, is cut short over a large part of England by the rapid increase of Roman influence, culminating in actual conquest, finds its continuous development in Caledonia and Ireland.”

Also Mr. Cochrane² writes:—

“The period between the Late Celtic and its development into the Christian trumpet pattern of the seventh and eighth centuries has not yet been filled, and the older style of ornament survived longer than is generally thought.”

In face of these facts, and the opinions of highly competent archæologists, there is no early place for the Langbank comb in the serial evolution of Late Celtic ornaments; nor, indeed, is there, to my knowledge, any positive evidence that any portion of that evolution

¹ *The Early Christian Monuments of Scotland*, p. 372.

² *Loc. cit.*, p. 216.

belonged to pre-Roman times in a locality so far north as the Clyde Valley. I agree, however, with Mr. Mann that the Langbank structure was not a "going concern" at any time during the Roman occupation of Scotland, for the reasons he has given. But I differ from him *in toto* in dating it to the pre-Roman period in Scotland, in support of which he has advanced no argument worthy of being seriously considered. That a toilet comb, decorated with a debased geometrical design of Late Celtic character, should be found in the débris of a habitation which had become a ruin prior to the Roman occupation of the district is, to my mind, a most improbable hypothesis. That, however, the comb may have been the product of Romano-British times, like that at the Ghegan habitation, is not questioned; but in that case we would expect to find more traces of Romano-British influence than the little brass brooch, which may also claim an equal degree of antiquity. Mr. Mann's statement that the design on the Langbank comb is earlier work than that on the Ghegan specimen, if founded on anything more solid than mere conjecture, is refuted by the variety of the ornamental designs on the Loughcrew bone plaques, which include some precisely similar to those on both combs, associated with the more characteristic divergent spirals, trumpet-shaped spaces, etc. If these different patterns were contemporaneous, how can it be said that one is older than another? In truth, they all belong to the pure geometrical and later phase of Late Celtic art which lingered in North Britain in a more debased state on Highland brooches, powder horns, etc., to within a century or so of the present time. Other specimens of this art have been observed on objects from crannogs, brochs, hill-forts, etc. Among these may be mentioned the designs on a piece of wood from Lochlee;¹ the massive bronze collar found on the Hynd-

¹ *Lake-dwellings of Europe*, Figs. 144, 145.

ford crannog;¹ an enamelled disc from the broch of Torwoodlee;² and another from the vitrified fort of Beregonium.³ But these instances are too limited to permit of dogmatism. At any rate, so far as archæology may be trusted as a guide, it clearly points to that obscure period which immediately followed the withdrawal of the Roman soldiers from Britain as the chronological horizon to which the Langbank comb is to be referred rather than to any portion of the pre-Roman period.

The small penannular brass or bronze brooch also takes its place among the relics of the early Iron Age, as brooches, indisputably analogous to it, if not precisely similar, have been found among Romano-British, Celtic, and Saxon remains in numerous localities throughout the British Isles and on the Continent. Among those more closely resembling it the following may be mentioned. General Pitt-Rivers has figured four specimens found among the débris of Romano-British villages—one from Woodcuts Common,⁴ two from Rotherley,⁵ and one with ends turned back, similar to that represented in vol. ii. Plate 102, Fig. 15.⁶ I have here copied one of these brooches, that from Woodcuts Common (Fig. 46), which is of bronze with the ends slightly ornamented. It was “found in the filling up of the main ditch at a depth of 14 inches beneath the surface.” From this it would appear to be more recent than the ordinary Romano-British remains.

Of fifteen bronze fibulæ found at Wilderspool, Cheshire, one is annular, eight are penannular, and six are of the bow-shape. One of the penannular kind is here figured (Fig. 48) from the work of Mr. W. T. Watkin;⁷ another

¹ *Proc. S. A. Scot.*, vol. xxxiii. p. 385, Fig. 15.

² *Ibid.*, vol. xxvi. p. 81.

³ *Ibid.*, vol. xix. p. 247.

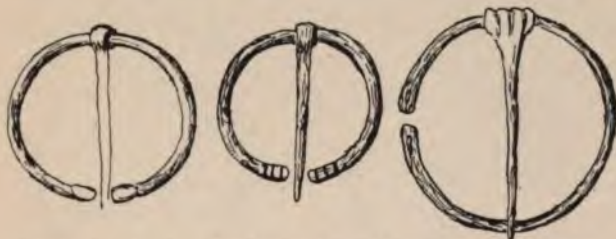
⁴ *Excavations in Cranbourne Chase, etc.*, vol. i. Pl. 16, Fig. 10.

⁵ *Ibid.*, vol. ii. Pl. 102, Fig. 15, and Pl. 103, Fig. 14.

⁶ *Ibid.*, vol. iv. Pl. 257, Fig. 5.

⁷ *Roman Cheshire*, p. 265.

(Fig. 45) was found in London excavations, and is figured by J. E. Price;¹ another, of Saxon origin, is figured by Akerman;² and a specimen (Fig. 47) from the brooch of Okstrow is figured in the *Proceedings of the Scottish Antiquaries*.³ A penannular ring with slightly bulbous extremities, probably a similar brooch minus the pin, is among the relics from Camelon in the National Museum, Edinburgh. Another comes from one of the Dowalton⁴ crannogs, and yet another, very similar to the



FIGS. 45, 46, 47. PENANNULAR BROOCHES FROM LONDON, WOODCUTS, AND THE BROCH OF OKSTROW (3)

Langbank specimen, was found at Hyndford.⁵ Brooches of the same type are also common in Ireland, two being among Dr. Buick's collection of objects from the Moylurg crannog,⁶ which includes a small leaden Christian cross of the tenth century, and a pendant, also of lead, with a Late Celtic ornamentation. A penannular ring-brooch with the acus projecting beyond the ring was found on

¹ *Roman Antiquities*, Pl. viii. Fig. 7.

² *Pagan Saxondum*, Pl. XVIII. Fig. 4. With regard to this type of fibula, Mr. Akerman makes the following remarks: "The fibula No. 4 is of a form frequently met with in Anglo-Saxon interments. They do not occur so often in the Frank graves; but in the cemeteries of Livonia fibulae of a less simple penannular shape are more common, as may be seen in several examples now in the collection of the British Museum" (*Pagan Saxondum*, p. 36).

³ Vol. xi. p. 85.

⁴ *Ancient Scottish Lake-dwellings*, Fig. 16.

⁵ *Proc. S. A. Scot.*, vol. xxxiii. p. 386, Fig. 16.

⁶ *Loc. cit.*, p. 319, Figs. 3 and 5.

the Culbin sands,¹ a complete parallel to which was found in the recent excavations at Camelon.

Dr. Hume figures five penannular fibulæ,² with regard to which he writes that—

“they are very rude examples of a kind well known. They are supposed to be of the later Roman period; but objects of this kind are found not merely with Roman remains, but also among Saxon ones. Some of the more elegant forms are alluded to under the head ‘Brooches’; and in Ireland especially they are numerous and varied, both of silver and gold. An interesting example was obtained among some Roman remains

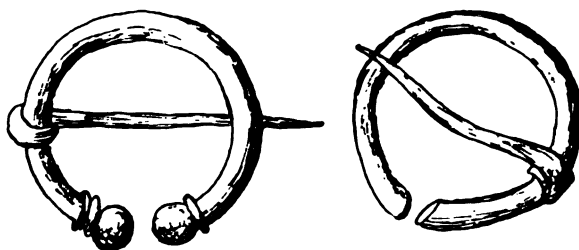


FIG. 48. PENANNULAR BROOCH FROM WILDERSPOOL, CHESHIRE (?)

FIG. 49. PENANNULAR BROOCH FROM LIVONIA (?)

in Yorkshire;³ others were found at Fairford among Saxon remains;⁴ and numerous others are alluded to in the ordinary works on archæology.”⁵

This type of brooch, *i.e.* a penannular ring carrying a movable pin, is not among La Tène remains, but its near analogue, the ring-buckle, is represented by a few specimens, one of which is figured by Dr. Gross.⁶ I need not say that numerous examples of the ring-buckle have been found throughout the British Isles in the later Iron Age.

¹ *Proc. S. A. Scot.*, vol. xxv. p. 506.

² *Ancient Meols*, Pl. IV. Figs. 5 to 8.

³ Wright's *Arch. Essays*, i. p. 25.

⁴ Wylie's *Fairford Graves*, Pl. V. Fig. 6, and Pl. VI. Fig. 3.

⁵ *Ibid.*, p. 67.

⁶ *Oppidum Helvète*, Pl. X. Fig. 10.

Outside the British Isles the penannular brooch of the Langbank type is very common on the southern shores of the Baltic. The catalogue of the Archæological Congress, held at Riga, in 1896, shows on Plate XIX. over two dozen specimens with slightly expanded and more or less ornamented extremities, all of which are classified as relics posterior to the eighth century A.D. Two from Livonia, one (Fig. 49) being not unlike the Langbank specimen, but only a shade larger, are figured by Baron de Baye.¹

M. Aspelin, in a description of the characteristic forms of the Finno-Ougrian group during the Iron Age, thus refers to the penannular or horseshoe fibulæ:—

“Il résulte, de ce qui précède, que la boucle en forme de fer à cheval provient probablement des districts occidentaux du groupe finnois, peut-être est ce un emprunt fait à la Lithuanie. En effet, cette boucle se retrouve aussi en Lithuanie; j'en ai noté au musée de Schwerin quelques échantillons en fil de bronze, et de forme simple; il s'en trouve aussi, dit-on, deux ou trois spécimens au musée de Breslau. En revanche, il n'existe, à ma connaissance, aucun échantillon de l'une ou de l'autre forme provenant de la région slave de l'âge du fer, de la Bohême, de la Galicie, de la Pologne et de la Russie.”²

A small penannular brooch was found in a prehistoric station, along with some iron objects, at Citania de Briteiros, in Portugal.³ The ends of this fibula are slightly reverted. Similar brooches are met with in Spain, a few specimens of which may be seen in the National Museum of Antiquities, Edinburgh. About two dozen of these fibulæ made of bronze have been found in Denmark, which are assigned to the early Iron Age, before Roman influence extended to the country.

¹ *Industrial Arts of the Anglo-Saxons*, p. 59 and Pl. IX.

² *Congrès International*, Stockholm, p. 671, Figs. 19-21.

³ *Ibid.*, Lisbon, p. 658, Pl. II. Fig. 8.

One of these is figured in the *Mémoires de la Société Royale des Antiquaires du Nord*, 1892, p. 184.

Everything, therefore, points to the origin of the simple penannular brooch in Western Europe during the early Iron Age.¹ Though occasionally met with on Romano-British sites in Britain, it appears to have been essentially a native production, nor is it among the objects specially associated with Late Celtic remains. Its invention was probably contemporary with the evolution of ring-buckles and the ordinary buckles so much used in military equipments and horse trappings. Notwithstanding the subsequent changes it has undergone in the hands of the Celtic races in Scotland and Ireland, and of the Scandinavians of later times, the primitive form still continued to exist, and it is this survivalism which renders the Langbank brooch of less chronological value than, *primâ facie*, one might expect. The truth is, it might date from Romano-British times to any date up to late mediæval times. Its evolution into the well-known massive and highly ornamental Celtic brooches of the early Christian period forms one of the most striking chapters within the entire range of Celtic art in Scotland.

There is little evidence of the age of the Langbank structure to be derived either from its structural details or its geological position. The woodwork is partly on the surface, and as it contains few prepared beams, the interior being made up of decayed brushwood, which nowhere is deeper than eighteen inches, it would be impossible to regard the site as of great antiquity. The

¹ A penannular brooch of bronze, ornamented, and having a movable pin, was found while digging a gravel-pit at Gogar, near Edinburgh, in 1811, which seems to be not only unique, but a puzzle, to antiquaries, as it was associated in the gravel with relics which belonged to the late Bronze Age (*Proc. S. A. Scot.*, vol. vi. p. 311). But whatever explanation may be given of the Gogar brooch, the penannular type, in its simple form, appeared in this country in the early Iron Age.

discovery that some of the larger beams at the margin of the *annexe* had been pinned to the ground by stout wooden pegs showed that the structure formed the foundation of some kind of stone superstructure. Similar wooden basements were common among the stone crannogs of Scotland and Ireland.

Evidence of cutting marks by metal tools on the woodwork was put beyond cavil on the day of my visit to the "crannog." My attention was first directed by Mr. Bruce and Dr. Bryce to two pointed piles, recently drawn up from the circle, and afterwards to the three pegs, already referred to, which passed through round holes in a horizontal beam and pinned it to the ground. Both my companions, without any reservation whatever, agreed with me that these pins or pegs, as well as the large piles, had been pointed by sharp metal tools. Yet the pile from Dumbuck, exhibited at the meeting of the Society of Antiquaries, showed better workmanship—cleaner and broader cuts, as if the tool had a sharper and longer cutting edge. The two iron axes from the crannogs of Lochlee and Buston, Ayrshire, were narrow implements, the cutting edge, in either case, scarcely amounting to three inches.¹

Dr. Bryce, who I understand is describing the osseous remains in the committee's report to the Glasgow Archaeological Society, informs me that he has identified among them bones of the *Bos longifrons*, several individuals being represented. This is important in so far as it places the structure within the same chronological range as the Scottish crannogs. If Dr. Bryce could inform us when the *Bos longifrons* ceased to exist in the west of Scotland as a distinct breed, he might limit the range on the modernity side of this inhabited site. A typical specimen of this small ox, represented by the frontal portion

¹ See *Ancient Scottish Lake-dwellings*, Figs. 46 and 223.

of the skull and the horn cores, was found in the Elie kitchen-midden which, on other grounds, has been assigned to the seventh or eighth century A.D.¹

The general conclusions to be derived from the above investigation of the archæological materials supplied by the three Clyde sites may be thus briefly stated. They were constructed and inhabited in post-Roman times, but the range of their occupancy is uncertain; probably it was different in each case. The hill-fort of Dunbuie, as regards structure, relics, and state of decay, was quite in keeping with analogous remains in other parts of Scotland; nor is there anything to suggest that it was inhabited by a colony of foreign idolaters, except, of course, the disputed objects. There can be little doubt that the submarine structures of Dumbuck and Langbank were the foundations of dry-stone buildings precisely similar to what has been observed in many of the stone crannogs, both in Ireland and in Scotland. Their situation in a marine estuary is, however, a novel and interesting feature which, when carefully and impassionately considered, may ultimately throw unexpected light on the early civilisation of the district. When these structures ceased to be utilised for the special purpose for which they were originally constructed—whatever that may have been, whether fort, beacon, or fish-bothy—they must have remained for a long time as ruined cairns until they were finally removed, in comparatively modern times, as an obstruction and danger to the navigation of the Clyde.

¹ *Proc. S. A. Scot.*, vol. xxxv. p. 299.

CHAPTER VII

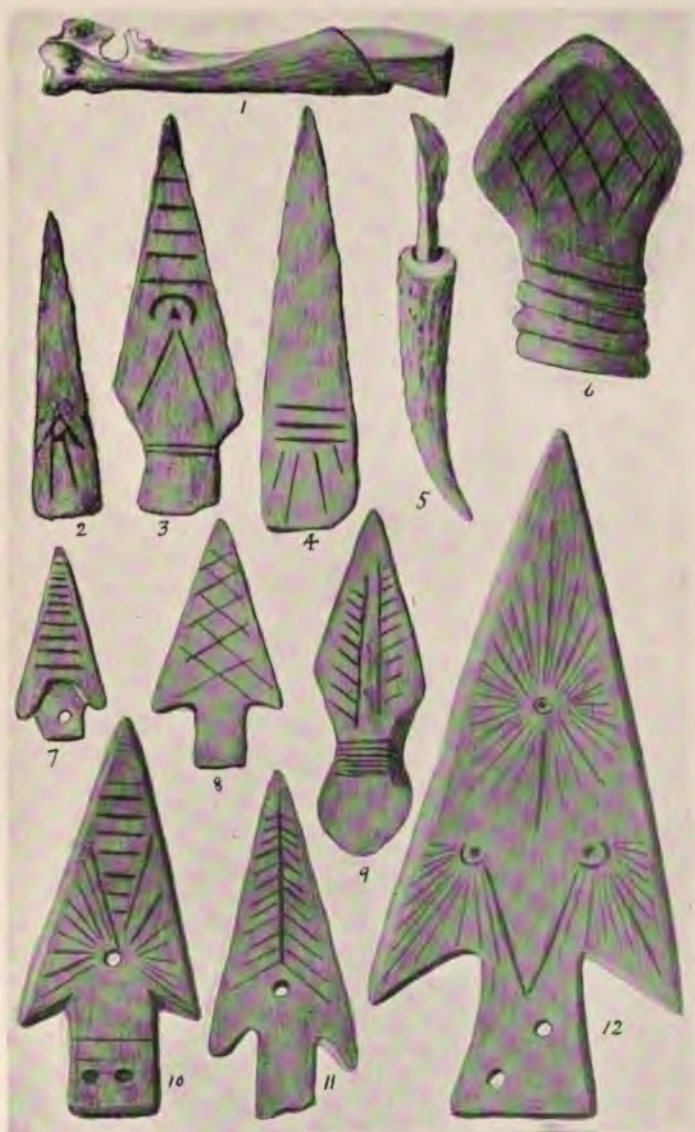
A CRITICAL EXAMINATION OF THE DISPUTED OBJECTS FOUND ON THE ANCIENT INHABITED SITES OF DUNBUIE, DUMBUCK, AND LANGBANK

A CURIOUS little object, showing evidence of human workmanship, was once found among the contents of a burial cist, then just exposed under a large prehistoric tumulus, which, for the moment, was placed along with the rest of the relics. Subsequently, however, it turned out to be a piece of cork which had formerly done duty as a stopper in a soda-water bottle. No one doubted that the cork had been found in the cist, but no one could explain how it had got there, and all the investigators were above suspicion. Now, if these investigators chose to argue that the cork was a genuine relic of the prehistoric period, would the fact that it was, on unimpeachable authority, picked up inside the grave be satisfactory and conclusive evidence of their contention? The cork had "precisely the same evidence of authenticity" as the other objects in the grave; but notwithstanding it was unhesitatingly rejected as worthless. Why? Because it bore inherent evidence of being a production of recent times. Now, I hold that the disputed objects under review are precisely paralleled by the cork, only the former may not have the evidence of modernity so readily decipherable as the latter.

In order to facilitate the examination of the peculiarities of these unprecedented objects, it will be convenient to

group them, so far as that may be possible, under the types of antiquities to which they have the greatest resemblance, viz. (1) weapons, (2) implements, (3) "amulets" or pendants, (4) cup-and-ring stones, and (5) carved human figurines or "idols."

(1) Under the category of weapons are some dozen spear-head-like objects made of slate or shale (Plate XIII.). Of these, four of slate and one of shale, are from the Dunbuie fort, and the rest, all of slate, from Dumbuck. They appear to have been finished by some kind of coarse friction, such as could be made with a file or sand paper, and then more or less polished. They are all ornamented with linear designs scratched, sometimes on both sides, with a sharp tool, with the exception of one or two which have small cups, or cups with lines radiating from them. The lines look as if they were freshly incised in some parts, but in others they appear to have been more or less polished over. There is no evidence whatever to indicate that any of these weapons had ever been used. Indeed, they are absolutely unfit for any spearing purposes, not only because of the softness of the material—that of the large specimen from Dumbuck being described by Mr. Bruce as unusually soft—but also on account of the bluntness of their points and edges. Two of them have a small hole in the stem, and another has two holes, suggesting a method of hafting. The lower of the two holes in the Dumbuck specimen was so firmly plugged with a wooden pin that it had to be punched out. It is rather strange that a small peg of wood, not half an inch long and less than half that in diameter, should not only have retained its position but actually have become "fossilised or mineralised," when everything else—bones, horns, wood, etc., had become softened and greatly decomposed by the slush in which they lay.



SPEARHEADS AND IMPLEMENTS FROM DUMBUCK AND DUNBUIE

NOS. 1 TO 5 = $\frac{1}{2}$; NO. 6 (SHALE) = $\frac{3}{4}$; ALL THE REST ABOUT $\frac{1}{2}$
 NOS. 1 TO 5 AND 12 ARE FROM DUMBUCK, AND THE REST FROM DUNBUIE

It is curious to note how different are the inferences that different minds draw from the same thing. At the time that the *Glasgow Herald* controversy was at its height, I was reprimanded in a letter to that journal (February 4th, 1899) for not replying to the "evidence of genuineness attached to the spear-head at Dunbuie in having a root growing through it, which root must have been a few years old when the fort was first discovered, and that the large spear-head from the crannog had in the fossilised or mineralised oak peg a proof of very great age."¹

If the Dunbuie spear-head lay in the débris of the fort for centuries, what, may be asked, were the intervening or exciting causes which led to the growth of a root a few years ago, where for ages previously there was nothing of the kind? If, however, it had been deposited in disturbed débris during last year's operations, it would be quite natural to find a rootlet from the early spring-growth penetrating the aperture.

The statement made on page 158 that all the objects that could be labelled as weapons were "absolutely worthless as real weapons," called forth at the time quite a chorus of disapprobation. Mr. Andrew Lang at once found parallels to the spear-heads "in the Oceanic area," as well as among the "sacred things" of a "still extant Neolithic race" in Australia.

Dr. David Murray also goes far afield in search of analogous weapons. In a communication to the *Glasgow Herald* (March 25th, 1899) he writes as follows:—

"The spear or lance heads are made of slate, apparently the common slate found on Garelochside and Lochlomondside and elsewhere in the district. It is objected that such objects were never made of slate and would have been useless if they were.

¹ I understand the excavations at Dunbuie extended over a period of nine months, but had been discontinued during the winter.

This objection, however, is not well founded. Slate tools and weapons, although not so plentiful as those of flint and other hard stones, are not uncommon, and probably have not been so well preserved just because they were less valuable and more liable to breakage. The so-called 'Picts' knives' and the flensing knives of the modern Esquimaux are of slate. Curved knives of slate have been found in Norway and Ireland. There are knives, axes, and other implements of slate and sandstone in the National Museum, Edinburgh, and in the Museum of the Royal Irish Academy there are numerous articles of slate of the stone-weapon or weapon-tool species, and resembling swords, daggers, knives, cleavers, and celts. The Dumbuck and Dunbuie objects are somewhat clumsily fashioned and want the perfection of form and finish that the best flint tools and weapons exhibit; but this was the rule when inferior material was employed."

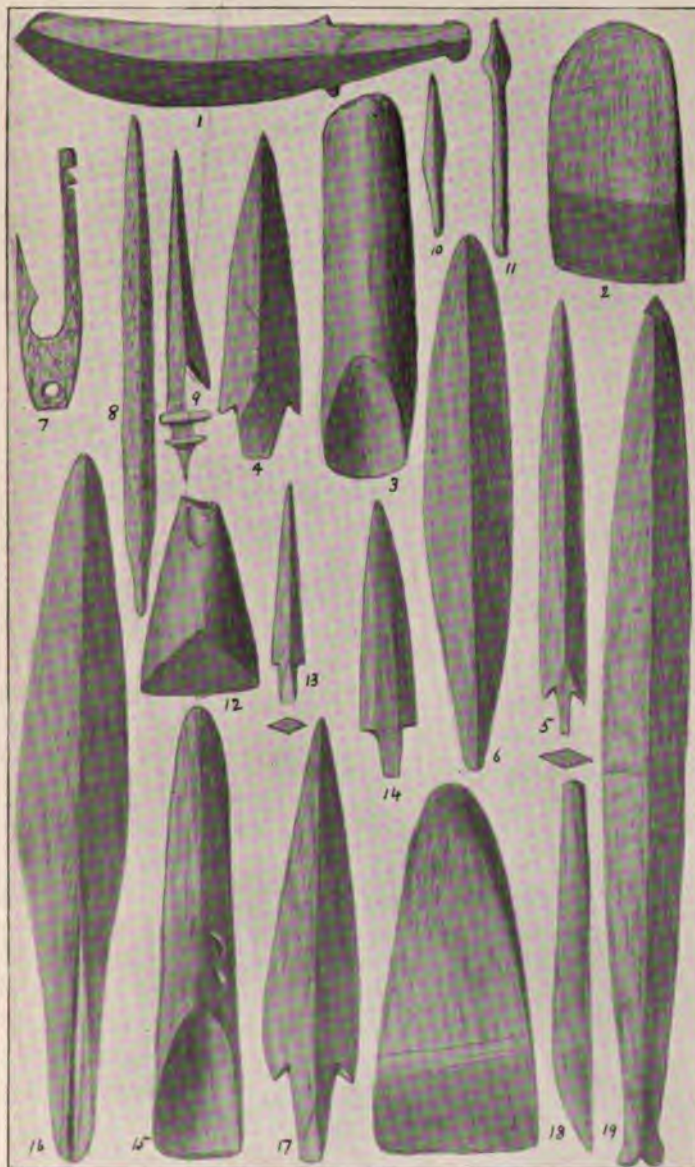
One would suppose from these remarks that it had been asserted that tools and implements were never made of slate of any kind, or in any country, by Stone Age people. The materials out of which the Clyde spear-heads are made—soft slate and shale—are not suitable for either piercing or cutting purposes; nor could any of them have been used in this way for the obvious reason that they have neither sharp points nor thin edges. Nor are they in any respect similar to weapons of the Stone Age in Scotland. Dr. Murray forgets that we are not dealing with real works of the Stone Age people at all, but with certain fantastic objects admittedly belonging to the Iron Age. Hence, in comparing these novel objects from the Clyde with "articles of slate of the stone-weapon or weapon-tool species of the Stone Age," he has deviated from the laws of comparative archaeology. The precise merits of this point will be brought out by the following queries better than by any amount of discursive arguments. Where are spear-heads like those of the Clyde of any material to be found? Has

anyone ever seen cutting implements or weapons made of shale in any period? Or any made of slate within the central area of Scotland similar in texture to the material of which the Clyde weapons are made? Will anyone explain how the great spear-head of Dumbuck could be used as a warlike weapon, or to spear game, or fish, or any living thing? Has anyone seen a spear-head of stone hafted by means of a wooden pin passing through a hole in the stem? And, if no examples with any of these characteristics occur in the Stone Age, what reason is suggested for resorting to such clumsy and unprecedented methods of manufacturing tools and weapons of friable stone when the inhabitants were in possession of excellent cutting implements of metal?

The references made by numerous writers to the existence of similar spear-heads in foreign countries, especially in Norway and Sweden, is a clear issue which can be tested by precise archæological evidence; and as this evidence is interesting in itself, and little referred to in English works on archæology, it is desirable to explain briefly how this matter stands.

In the regions north of the 65th degree of latitude in both these countries remains of a Stone Age civilisation, comprising axes, chisels, knives, spear- and arrow-points, etc., are met with in considerable numbers (Plate XIV.). These tools and weapons are made generally of native schist (*skiffer*), but sometimes of reindeer horn, and are so totally unlike the remains of the Stone Age found in the more southern parts of the Scandinavian peninsula, not only in material but in form, that the two groups can be differentiated at a mere glance. To the northern group Mr. Rygh has given the name *Arctic*, because, beyond the 65th degree of latitude, no flint tools, or any other remains peculiar to prehistoric Scandinavia proper, have been found, although specimens of those imple-

ments characterised as *Arctic* are not unfrequently found as far south as central Sweden. One remarkable fact about these two groups is that, although sporadic finds of both are occasionally met with within the borderland between their respective archæological areas, they are never found together, or in any way mixed. No burial or inhabited site containing specimens of the two kinds of antiquities has ever yet been found. The interpretation of these well-ascertained facts, according to Scandinavian archæologists, is that they are the respective remains of two distinct peoples—the Arctic, representing the ancestors of the Lapps and some of the Finns (as similar remains are found in Finland), and the other, or southern, the Scandinavian people of prehistoric times. The former group consists of the relics of a real Stone Age civilisation, but there is some difficulty in coming to an opinion as to whether or not it is later than the Stone Age remains of Scandinavia proper. On Plate XIV. are placed illustrations of a number of typical objects of this Arctic group, made of schist or reindeer horn, which shows at a glance that they are totally unlike any of the Clyde objects. The Arctic spear-heads, though large, sometimes reaching 6 or 7 inches in length, have a slender shape, sharp points, and thin edges. The other objects in the group are equally well finished and adapted to the special purposes for which they were intended. The people who manufactured them utilised the native black schist, because it was the best local material to be got in their country. On this issue my opponents have landed on the horns of a dilemma. If the Clyde spear-heads are Neolithic relics, how are the early Iron Age remains associated with them to be accounted for? If, on the other hand, they are products of the Iron Age, why were they manufactured at all? To compare them with the actual spear-heads



OBJECTS OF THE STONE AGE FROM THE NORTH OF SCANDINAVIA
KNOWN AS "THE ARCTIC GROUP"

ALL $\frac{1}{2}$ EXCEPT 8, 9, 10 AND 11, WHICH ARE ABOUT $\frac{1}{4}$

of a Neolithic civilisation, to which they have not only no striking resemblance in structure, form, or technique, but which never extended beyond a limited area, not even to the southern parts of Scandinavia—not to mention the Clyde district—seems to me to be an abuse of the principles of comparative archæology.

Similar remarks are equally applicable to the spear-heads of slate cited from Australia, Canada, the "Oceanic area," etc., as well as to isolated groups of implements made of slaty materials in Orkney and Shetland. None of the latter objects have ever been found as far south as the central area of Scotland, nor have they any structural resemblance to the products of the artists of the Clyde district.

(2) The only objects which come under the category of implements are: a natural splinter of stone inserted into the sawn end of the tyne of a deerhorn (Plate XIII., No. 5); a piece of stone (No. 1) rudely resembling a knife inserted into a bone handle; and a piece of flint also supposed to have been inserted into a bone handle. None of these belong to any Neolithic types, nor, so far as I can see, could they have been of any practical use in the Iron Age. Are they also to be paralleled with the totems and magic emblems of the Arunta race?

(3) The largest group of objects (Plate XV.) consists of the so-called amulets or pendants of stone, shale, and shell, some fifteen to twenty specimens of which have been preserved and recorded as having been found on the different stations, viz. three from Dunbuie (exclusive of a few perforated oyster shells), eleven from Dumbuck, and one from Langbank. Their ornamentation is chiefly of the cup-and-ring order, only a few having patterns composed of straight lines. Some of them are so large as to be unfit to be used as

amulets or pendants, such, for example, as that represented by No. 14 which is 9 inches long, $3\frac{1}{2}$ inches broad, and $\frac{1}{2}$ inch thick. The ornamentation consists of a strongly incised line running downwards from the perforation with small branch lines directed alternately right and left. Any human being, who would wear this object, either as an ornament or religious emblem, would be endowed with the most archaic ideas of decorative art known in the history of human civilisation. Yet we can have no doubt that the individual who manufactured it, if he were an inhabitant of any of the Clyde sites, was at the same time living in a period not devoid of culture, and was in possession of excellent cutting implements, most likely of iron, with which he manipulated wood, deer-horn, and other substances. These objects are nearly all perforated, as if intended for suspension, but sometimes, in addition to this, there is a large central hole around which there is always an ornamentation, generally consisting of incised circles or semicircles, with divergent lines leading into small hollow points, the so-called cup-marks. The pebble with the palm of a left hand incised on one side, and a boat with three rowers on the other (No. 10) is the most remarkable of this class. It appears to have been found within the cavity of a broken bone, apparently the articular end of a leg bone of some bovine animal, which was "unearthed from the deposit at the bottom of the canoe."¹ I have not been able to learn what is the precise meaning, or symbolism, attributed to the device of the expanded hand with the cup-and-ring mark in the palm. Judging, however, from the care taken to conceal the charm, it must have been considered by its original owner as one of his most treasured household gods. It would almost appear as if these Dumbuck idolaters had

¹ See page 162.



OBJECTS OF SHALE AND STONE FROM DUMBUCK

ALL ABOUT $\frac{1}{2}$, EXCEPT NO. 5 (AN OYSTER SHELL) = $\frac{1}{2}$, AND NO. 10 (A STONE PEDICLE) = $\frac{3}{4}$

suffered persecution at the hands of Celtic people, and had been forced to abandon their habitation in great haste, as suggested by Mr. H. J. Dukinfield Astley in his penultimate deliverance on the Clyde mystery (p. 169).

(4) The most meaningless group—if a degree of comparison be admissible in regard to a part when the whole is absolutely incomprehensible on archæological principles—consists of a series of unprepared and irregularly shaped pieces of laminated sandstone (Plate XVI.) similar to some of the stones of which the fort of Dunbuie was built,¹ having one of their surfaces decorated with small cup-marks, sometimes symmetrically arranged so far as to indicate parts of geometrical figures, and at other times variously combined with lines and circles. Two fragments of bones, also from Dunbuie, are similarly adorned (Plate XVI., Nos. 13, 14). Eleven of the twelve sandstone fragments which make up the group were fractured in such a manner as to suggest that the line of fracture had intersected the original ornamentation, and had thus detached a portion of it. If this be so, there must have been originally at least two or three other portions which, if found, would fit along the margin of each of the extant portions, just as the fragments of a broken urn come together. Yet among these decorated stones not one single bit fits another, nor is any of the designs the counterpart of another. If we suppose that these decorated stones are portions of larger tablets on which the designs were completed, then either they were broken before being introduced into the débris of the fort, or the designs were intentionally executed in an incomplete state, just as they are now to be seen on the existing natural splinters of stone. The supposition that the occupiers of the fort possessed the

¹ All the specimens of this group were disinterred from the ruins of this fort.

original tablets, and that they had been smashed on the premises, is excluded by the significant fact that only one fragment of each tablet has been discovered. For, in the breaking up of such tablets, it would be inconceivable, according to the law of chances, that one portion, and only one, of each different specimen would remain while all the others had disappeared. On the other hand, the hypothesis that the occupiers of the fort carved these designs on the rough and unprepared splinters of stone in the precise manner they now come before us, seems to me to involve premeditated deception, for it is difficult to believe that such uncompleted designs could have any other finality of purpose.

Looking at these geometrical figures from the point of technique, they do not make a favourable impression in support of their genuineness. The so-called cup-marks consist of punctures of two or three different sizes, so many corresponding to one size and so many to another. The stiffness of the lines and circles reminds one more of ruler and compass than of the freehand work of pre-historic artists. The patterns are unprecedented for their strange combinations of art elements. For example, No. 9, Plate XVI., looks as if it were a design for some modern machinery. The main ornament on another fragment of sandstone (No. 12), consisting of a cross and circle composed of a series of cup-marks, seems to be a completed design; but yet at the corner there are lines which are absolutely meaningless, unless we suppose that they formed part of a more enlarged tablet. Similar remarks apply to Nos. 3 and 8.

(5) The carved figurines, "idols" or "totems," six in number, showing more or less of the human form divine, are all, with the exception of the limpet shell, made of the common shale of the locality, four being from Dum-buck and one from Langbank (Plate XII.). The illustra-



MARKED STONES AND BONES FROM DUNBUIE

NOS. 1 TO 12 = COARSE SPLINTERS OF SANDSTONE FROM 2 TO $8\frac{1}{2}$ INCHES IN LENGTH;
 13 AND 14 = MARKED BONES; AND 15 TO 18 = ORNAMENTED WORKED STONES ($\frac{1}{2}$)

tions (Figs. 50-4) will give some idea of their grotesque appearance, but it is unnecessary to describe them more than to say that they are unlike anything in any collection in the British Isles, or elsewhere. Attention has been directed to the art displayed by these strange objects, Mr. Andrew Lang recognising in them the work of "the early Glasgow school." On this point I offer no opinion, as I know nothing, not even of the existence of such a school; but I should say that they disclose the hand of one not altogether ignorant of art. The evidence on which Mr. Lang makes the above suggestion is, however, worth looking into, more especially as it is capable and worthy of being discussed on archaeological grounds. Mr. Lang's theory of the origin of the art of the Clyde idolaters was first published in *Longman's Magazine* for January, 1902, from which the following is an extract:—

"Personally speaking, I believe that the anomalous finds in the Clyde are old and genuine, as old, perhaps, in character as 400 A.D., and surviving on till one knows not how late. . . . In these queer things I recognise the early Glasgow school at work. There are much more advanced designs on bits of shale



FIG. 50. GROTESQUE FIGURE OF
SHALE FROM DUMBUCK (†)
From Drawing by W. A. Donnelly

found, I think, in the Isle of Bute. Here we see drawn a beast which may be a seal or may be a staghound, but is perhaps quite as like the lizard in *Alice in Wonderland*. A recognisable dog is pursuing a recognisable deer. But these designs are accompanied by alphabetic writing and familiar Celtic ornament."

The archæological discoveries in the Isle of Bute, on which Mr. Lang founds his hypothesis, are briefly as follows: A few years ago, in the course of excavations made inside the old encircling wall of the ruined church of St. Blane, foundations of some ancient dwellings were exposed, and from their débris the objects in question were disinterred. In drawing Mr. Lang's attention to these objects when showing him the Dumbuck relics in the National Museum, it never dawned on me that his searching glances had detected any art elements common to them and the "queer things" of the Clyde sites.

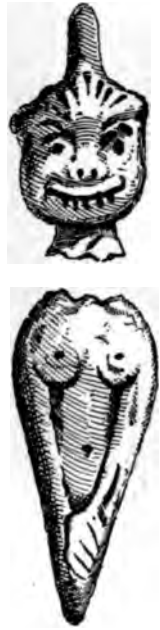


FIG. 51. FIGURE
OF SHALE FROM
DUMBUCK (†)
From Drawing by
W. A. Donnelly

The assortment of objects collected among the débris of the inhabited sites at St. Blane's church consists of a number of quartzite hammer-stones, a few whetstones (one neatly perforated for suspension), polishers, a whorl of steatite, portion of a mould of sandstone, part of a jet armlet, rings of shale (both finished and unfinished), together with some dozen fragments of shale showing traces of workmanship. One splinter had a small cross on one side, and the letters "DA" on the other. Of slate fragments there were several. One had both surfaces ornamented with rudely scratched scrolls and a few alphabetic letters in old Irish script (see Dr. Joseph Anderson's description of them).¹ Two

¹ *Proc. S. A. Scot.*, vol. xxxiv. p. 307.

other portions had patterns of Celtic knot-work, and three incised outlines of animals representing a stag-hunt. There were also found some fragments of glazed pottery, of two small crucibles, and of the horns of the red-deer and the roe. Through the kindness of the Council of the Society of Antiquaries of Scotland, I am enabled to give a few illustrations (Figs. 55-9) of the kind of art exhibited on these fragments of shale and slate to which Mr. Lang has appealed. By a comparison of these with the illustrations of the productions of the "Cran-nog" artists, readers have an opportunity of judging as to the resemblances and differences between the two series of objects.



FIG. 52. SHALE FIGURE
FROM DUMBUCK ($\frac{1}{2}$)

From Drawing by
W. A. Donnelly



FIG. 53. SHALE OBJECT FROM
DUMBUCK ($\frac{1}{2}$)

As to the nature and chronological horizon of these Bute objects there can be no doubt. Not only were they associated with the ruins of an early Christian church, said to be of "Norman work," but all the designs belong to a class of art which is characteristic of early Christian times in Scotland. They are, however, so inferior, from the artistic point of view, that they can only be regarded as degraded survivals from the most flourishing period of that art. In support of this view it may be stated that five portions of crosses adorned with the familiar designs of the early Christian artists—men and animals sculptured in relief, interlacements, fretwork,

etc.—were discovered in a portion of the wall of the church which had to be taken down before it could be properly restored ; thus showing that, by this time, the sculptured crosses had already lost much of their former sacred character. Some years ago it was discovered that large and small fragments of similarly sculptured crosses had been built into the foundations of the tower of the Cathedral of St. Andrews, proving that before the middle of the twelfth century their symbolism no longer appealed to Christian sentiment.



FIG. 54. LIMPET SHELL WITH
HUMAN FACE

From Drawing by W. A. Donnelly

In the decaying stage of this art, and long after it ceased to be a ruling element in church architecture and Christian monuments, interlaced patterns and fretwork continued to be ornaments on reliquaries, croziers, brooches, powder-horns, dirk-handles, etc., up to comparatively recent times. Even supposing there had been a church on the St. Blane site previous to

the oldest ruins still extant, all the relics of the artists who scribbled rude figures on pieces of slate and shale would be well within the Christian period in that part of Scotland. But what, in the name of common sense, have they to do with the "queer things" of the Clyde?—as not a single object in the former collection has the least resemblance to any of the latter—the only thing they have in common is the slate or shale of which they were manufactured.

From collateral considerations this discordance between the products of the Bute and Clyde artists is greatly

strengthened. The art elements of the former have a history, and can be traced throughout Europe. From the time that Late Celtic art took shape in this country, and became amalgamated with interlacements and other art elements from Eastern sources, every step in the development of the Christian Celtic school in Scotland can be traced as clearly as if they had been laid down on a genealogical chart. But as to the origin of the Clyde "grotesques," and whether they are to be looked upon as gods or demons, totems or amulets, things to be admired



FIG. 55. SPLINTER OF SHALE WITH AN INCISED CROSS ON ONE SIDE
AND ON THE OTHER THE LETTERS "DA"

From St. Blane's, Bute

or ridiculed, we are absolutely in the dark. Nor does archæology or history enable us to move one step forwards or backwards in search of their prototypes. For my own part, I can see no trace of either Christian or Celtic art in any of them.

It will be remembered that Dr. David Murray made a statement at a meeting of the Glasgow Archæological Society (19th January, 1889) to the effect that shale objects similar to those from Dumbuck had been found elsewhere in the Clyde valley, and that they proved the genuineness of the former (see page 162). Later on, in a communication to the *Glasgow Herald* (March 22nd and 29th, 1899) he gave a description of the Dumbuck discoveries under several headings—*history, structure, object*

of structure, the finds, the cause, other Clyde finds, result of evidence, and finally, the disputed objects. Under the heading "Other Clyde Finds" he writes as follows :—

"Various other objects have from time to time been found in the Clyde and in the Clyde drift which throw light upon those found at Dumbuck. At a meeting of the Archæological Society of Glasgow in 1895 I described a number of perforated stones found in the bed of the river, near Rutherglen Bridge. These, I have no doubt, were net or line sinkers, but I incline to think that they were comparatively modern. Similar stones of undoubtedly ancient date have, however, likewise been found.



FIG. 56. PIECE OF SLATE
WITH INCISED LETTERS
AND SCROLLS ($\frac{1}{2}$)
From St. Blane's, Bute

"When the excavation of Windmill croft was being carried on for the construction of Kingston Dock, Mr. James Bennie found in the river drift, at a depth of about fifteen feet from the surface—(1) a circlet of splint coal (weighing about $6\frac{1}{2}$ ozs.), $3\frac{1}{2}$ ins. in diameter, with perforation of $1\frac{1}{2}$ in.; (2) a circlet of bituminous shale (weight $16\frac{1}{2}$ ozs.), $5\frac{1}{2}$ ins. in diameter, with perforation $1\frac{1}{2}$ ins.; (3) an oblong square of bituminous shale, weighing 14 ozs., with perforation 2 ins.; (4) an oblong perforated pebble, weighing $14\frac{1}{2}$ ozs.; (5) a circlet of iron, neatly

made by an adept in handling metals, $1\frac{3}{4}$ ins. in diameter, with perforation of $\frac{1}{4}$ in., and weighing 8 ozs.; (6) a pebble, weighing 8 ozs., with groove all round it; (7) an oblong block of sandstone, weighing 58 lbs., ground all round, apparently an anchor stone; (8) several pieces of wood, not unlike a boy's bat, similar to the short paddles found with some of the Irish canoes, and a piece of bent wood like the letter S; (9) a perforated stone sinker, weighing 22 ozs. A stone celt was also found during the excavations."

The rest of Dr. Murray's list of recorded finds I must give in abstract. They include two sinkers, in the bed of the Clyde at Westhorn; a circular stone, $4\frac{1}{2}$ inches in diameter, with a groove round the edge, in a deposit of sand near the Clyde at Belvidere; two querns, at the foot of Jamaica Street; at Cuningar a vase, 16 feet beneath the surface and 150 feet from the margin of the Clyde; a stone celt, in the bed of the river at Rutherglen Bridge;



FIG. 57. PIECE OF SLATE WITH INCISED ORNAMENT ($\frac{1}{2}$)

From St. Blane's, Bute

another and a flint arrow-head, in the excavations for the Queen's Dock; a bronze socketed celt, at York Street Ferry; a denarius of Constantine II. and other coins, medals, etc., in the channel of the Clyde near Govan; a Roman coin, at Bridge Street, 25 feet below the surface; a Roman bowl of Samian ware, in Glasgow Green; a small urn, when digging the foundations of a building at

Springfield Quay; a cranium of *Bos primigenius* and a horn of the reindeer, in the alluvium of the Clyde near the junction of the Kelvin, etc.

This, then, completes the evidence which, according to Dr. Murray, proves the genuineness of the idols, amulets, totems, or whatever else they may be called, of Dunbuie and Dumbuck.¹ Now the only objects in this heterogeneous collection from all ages which can possibly be compared with the shale ornaments of the Clyde stations are the three perforated pieces of shale found in the excavations connected with the Kingston Dock. But these



FIG. 58. PIECE OF SLATE WITH INCISED ANIMAL ($\frac{1}{2}$)
From St. Blane's, Bute

dock relics have no incised designs, no cup-and-ring markings, no bearded idols with gaping mouths, no comic faces, no "blue points" with "drilled holes" and recent scratches, nor any other ornamented shells. The short wooden paddles may be too old to be comparable to the advanced navigation of the people of Dumbuck, as shown by the representation of a row-boat, with three oarsmen, which looks like that of a man-of-war with trained marines.

Moreover, the presence of pieces of worked shale in the form of rings, bracelets, discs, perforated portions,

¹ Langbank was not then discovered.

etc., has been noted in nearly all the Scottish crannogs hitherto investigated. Indeed, the industry in the manufacture of various objects of shale, jet, and cannel coal goes back to the Neolithic period, and comes down to late mediæval times. Circular rings and discs of cannel coal have been turned up in digging modern graves, as, for example, in the parish churchyard of Portpatrick, Wigtownshire. Here it has been recorded that in one grave were seventeen discs and four broken rings; in another, sixteen discs and three broken rings. Professor Duns, D.D., in combating the idea that these discs and

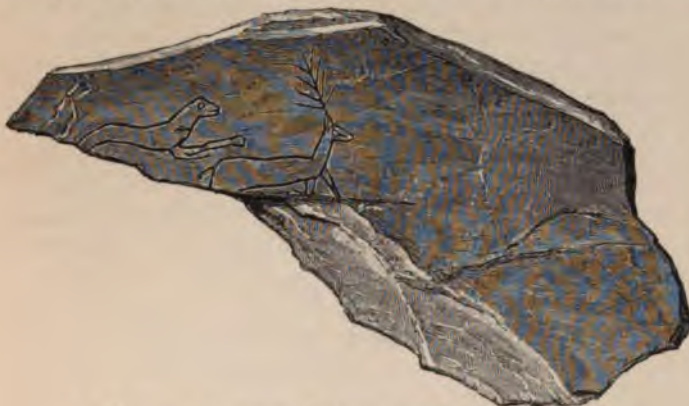


FIG. 59. PIECE OF SLATE WITH STAG HUNT ($\frac{1}{2}$)
From St. Blane's, Bute

rings were merely variants of the *obolus*—a tradition to that effect being current in the district—writes that “having been found only in some graves seems to indicate that the casting, both of rudely formed discs and broken rings, into these graves was intended to indicate that they are the graves of a class of persons who were characterised by some moral or social peculiarities.”¹ The slate and shale fragments at St. Blane, some of

¹ *Proc. S. A. Scot.*, xxviii. p. 127.

which were perforated, can hardly be dated to any period prior to the twelfth century.

One of the more recent solutions of the Clyde puzzle which has come under my notice is thus described and refuted by Mr. Lang in one of his numerous letters to the local press :—

“ I am informed that the rude masks, or grotesque faces, have lately been attributed to the soldiers of the Roman occupation. Satan finds some mischief still for idle hands to do, and for all that I know he may have found this ‘ ploy ’ for the Roman Tommy Atkins. . . . Unless we have evidence that any of the races enlisted under the Roman eagles actually did carve stone grotesque faces like those of the Clyde pile-structures, and of those soldiers we have abundant relics, it is oddly audacious to attribute them to the soldiers of Rome. Have any unmistakable Roman objects been found in or near the sites of the pile-structures? I think not ; and if this be so, if nothing like the grotesques is found on Roman sites from the Great Wall to the Clyde, and if no Roman objects are found near the pile-structures, the Roman-soldier theory may be magnificent, but it certainly is not science.”

With what charming ease and logical conviction does Mr. Lang, in these few touches, demolish the Roman-soldier theory ! Well, now, suppose we apply his logic to all the other Scottish periods, we can, with equal certainty, and on the very same grounds, show that the Clyde “ grotesques ” do not belong to any of them, either to the Stone, Bronze, Iron, Celtic, Late Celtic, Romano-British, Saxon, Mediæval, or, indeed, to any other period or style of art within the British Isles. May we, therefore, henceforth claim the support of Mr. Lang in regarding the disputed objects of the Clyde valley as altogether outside the pale of antiquarian relics, or, at any rate, as having no *locus standi* among the remains of any “ known phase of Scottish civilisation ” ?

THE SURVIVAL THEORY: SYMBOLISM

Over and above the brief synopsis of the principles, methods, and object of the science of prehistoric archaeology, discussed in the Prolegomena, there are two cognate fields of research which now call for a few remarks. These are, first, old traditions still surviving among modern civilised peoples; and, secondly, beliefs, customs, and habits prevalent among modern savage races. Some antiquaries look upon the former as an infallible medium for carrying down the stream of time more or less valuable germs of the social conditions which obtained before the development of modern civilisation. Others, again, regard the latter as furnishing a living picture of the past stratum of culture through which the present civilised inhabitants of the globe must have passed, at some time, in their upward march. The archaeological results derived from both these standpoints are, in my opinion, greatly overrated, at least in so far as they are supposed to elucidate the pre- and proto-historic culture remains of Europe.

The more urgent reason for introducing folk-lore as part of the subject-matter of this volume arises from the persistent and vigorous efforts which have been made in current literature to explain the meaning and symbolism of the "queer things" of the Clyde by the totems and other objects used in the ritual ceremonies, magical or religious, of savage races. "If genuine," writes Mr. Lang, "the marked stones of Dumbuck and Dunbuie indicate the survival into a relatively cultured age of a singularly archaic set of ritual and magical ideas."¹ To this I replied "that it was not a question of survivalism at all, for we had no evidence that a civilisation, having such an outward symbolism, ever existed within the British Isles. It was rather a case of spontaneous generation,

¹ *Proc. S. A. Scot.*, vol. xxxiv, p. 459.

the sudden intrusion on the archæological horizon of a group of fantastic objects without any recognisable pedigree."¹ Both these statements are, however, of little value, as they merely give expression to our respective opinions. But let us inquire what has scientific archæology to say on this vital point in the Clyde controversy.

To show how quickly tradition loses sight of the true meaning of an object once in common use, but subsequently superseded, we have only to cast a superficial glance at the popular ideas in vogue, at no distant date, among the civilised people of Europe, with regard to some of our ordinary prehistoric antiquities. Having occasion some time ago to deal with this subject, I expressed my views as follows :—

“The Greeks and Romans took particular notice of the polished stone hatchets which were then, as now, occasionally picked up in the fields and other odd places. Unable to account for their production on any other hypothesis, they regarded them as thunderbolts (*Ceraunia*), and professed to find them wherever lightning was seen to strike the earth; hence they came to be used as charms and talismans, to which extraordinary virtues were attributed. Some variant of the popular belief, so long prevalent in this country, that flint arrow-heads were the missiles of elves or fairies, was widely spread throughout the world. Equally persistent and widespread was the idea that these stone objects were possessed of the property of healing diseases and averting threatened calamities, such as the evil-eye and other imaginary ills. Dr. Bellucci, of Perugia, in his well-known *Catalogue of Italian Amulets*, has tabulated, under the heading of *Pierres de foudre*, twenty arrow-heads and thirty stone axes which had been used as charms throughout the country. Among the curiosities imported into Europe, after the geographical discoveries of the fifteenth century had opened up the New World to research, were stone implements, such as axes, chisels, arrow-points, knives, etc., found actually

¹ *Proc. S. A. London*, June 13th, 1901.

in use among various primitive people. This was the first clue to the true function of the so-called *Ceraunia* and *Pierres de foudre* of the ancients. In 1723 we find Jussieu suggesting at the Académie des Sciences that the *Pierres de foudre* were the implements of a savage people who lived in Europe in earlier times. But it remained for the new-born science of anthropology to give the *coup de grâce* to this kind of superstition."¹

From the above remarks it will be seen that these erroneous ideas with regard to the function of stone implements and weapons had sprung up and become stereotyped in the folk-lore and traditions of European nations within the comparatively short time represented by the interval between the Stone Age and proto-historic times, during which also their real use had been completely forgotten. Thus, in spite of folk-lore and traditions, the recollection of the use of stone axes, implements which were universally in common use up to the Bronze Age, had died out. Not only so, but another meaning or purpose was assigned to them, which has survived to almost the present day. Thus tradition has not only transmitted, but created, false evidence.

Of more importance is the human element which preserves certain usages and customs long after tradition has lost sight of their real origin, such as we find in the continued use of stone weapons, in the performance of religious ceremonies, into the metallic period. For example, in the Egyptian process of embalming the first incision on the body was made with a knife of Ethiopian stone, no doubt flint, as many such implements, supposed to have been used for this purpose, have been found in the tombs and elsewhere throughout the country. The Jewish people used stone knives for performing the ceremony of circumcision; and also the priests of Baal when, as on occasions of high festival,

¹ *Prehistoric Problems*, p. 31.

they hacked their persons in order to ingratiate themselves with their god. It is reported to have been a flint knife which Hannibal used when he sacrificed a lamb before he gave battle to Scipio on the banks of the Ticino. Underlying this religious conservatism was the fact that these weapons were survivals of an age when metals were unknown. Such survivals are common enough among the remains found on inhabited sites in Scotland. Among the relics from the Lochlee crannog are a polished stone axe (found close to an iron knife), a well-made horseshoe-shaped scraper of flint, and two portions of reindeer horns—identified as such by the late Professor G. Rolleston, of Oxford. Yet there can be no doubt whatever that this crannog was constructed and occupied in the Iron Age, as among the other relics found on it were iron hatchets, chisels, gouges, and a cross-cut saw. Also the woodwork down to the lowest logs bore unmistakable evidence of having been manipulated by such metallic tools. And as to the reindeer, its survival in the North of Scotland to about the twelfth century is fairly well authenticated.¹ Two stone axes were found on the Hyndford crannog associated with a number of other relics of the Romano-British period.² A bronze fibula of a late La Tène type, and a small polished stone axe, were disinterred from the débris of a hill-fort on Castle Law hill, near Abernethy.³ In excavating Roman camps also similar instances of the survival of culture-objects from previous ages are not unfrequently met with.

On the supposition that the Clyde "grotesques" are genuine relics of the people of the period to which the structures in question must be referred, it would be to the survival theory that one would naturally look for an

¹ See *Lake-dwellings of Europe*, p. 488.

² *Prehistoric Scotland*, p. 418.

³ *Ibid.*, p. 372.

explanation of their presence. In that case we ought to find, at least somewhere in Britain, decided and undisputed evidence of the existence of a phase of culture in the Stone Age in which the prototypes of the implements, weapons, amulets, idols, etc., of the Clyde "crannogs" and fort would be the prevailing forms then in general use. But of such archaic remains there is not a vestige, and consequently the hypothesis remains unsupported by any archæological data.

As to the scientific value of studying the manners and customs of modern savages, much could be said. Perhaps the most striking evidence that might be adduced on the affirmative side is the fact just mentioned, viz. that the superstitious ideas associated with the so-called *Ceraunia* and *Pierres de foudre* were first exploded by seeing how the American savages made use of similar objects. So long as ethnological comparisons are restricted to weapons, tools, and the appliances used in pastoral and agricultural operations, which are common elements of humanity from very early times, some valuable and interesting results may be obtained. When, however, folk-lorists attempt to illustrate the social and religious condition of prehistoric Europe by a parallelism between its antiquities and objects used in the religious or magic rites of modern savages, their labours appear to me to be futile. The very weakest side of this problem is exposed by the attempt to correlate the "sacred things" of the Arunta tribe, in Central Australia, with the disputed objects of the Clyde. To maintain that the latter (even supposing them to be genuine) are analogous to the former, or that they can have the same meaning and function, in face of the following extract from the recent work of Messrs. Spencer and Gillen, seems to me to be an exceptionally weak argument.

"We now come to deal with the patterns on the Churinga, all of which have a definite meaning attached to them, though

to decipher each individual one it is essential to gain the information from a man of the totem to which it belongs. Other natives may volunteer information, but as the same device will mean one thing to a native of one totem, and quite another thing to a man who belongs to another totem, and as a man's knowledge is strictly confined to the designs of his own totem, it is quite unsafe to ask, say, an emu man to describe to you the markings on a wild cat Churinga, or *vice versâ*.

"The whole design consists, with few exceptions, of a conventional arrangement of circular, semi-circular, spiral, curved, and straight lines together often with dots. The most frequent design met with is that of a series of concentric circles or a close-set spiral, the sets of circles or the spirals varying in number from two or three to as many as twenty, or even more; and these, when present, usually indicate the most important object which it is intended to represent in the whole design."¹

If, then, as above stated, the ornamentation on these Arunta "totems" and "Churinga" have not the same meaning as their analogues among the other tribes in Australia, what possible use can it be to compare them with the disputed objects from the Clyde district, which resemble them neither in shape nor ornamentation. Notwithstanding Mr. Lang's assertion that they are "in absolutely startling agreement," and the publication of an illustration (Plate XVII.) purporting to be that of a "Churinga" from Dunbuie,² I unhesitatingly maintain that there is no parallelism whatever between the two sets of objects. In order that there can be no mistake on this point I have here reproduced the figures of two "Churinga," published by Messrs. Spencer and Gillen (Figs. 60, 61), and one in the National Museum, Edinburgh (Fig. 62), from which it will be seen that spirals, concentric circles,

¹ *The Native Tribes of Central Australia*, pp. 144-5.

² *Journal of British Archæological Association*, September, 1901, Fig. 4. Where the original of this figure is to be seen I do not know, as no object having the slightest resemblance to it is among the objects in the collection from Dunbuie in the National Museum of Antiquities, Edinburgh.



"CHURINGA FROM DUNBUIE"

fragments of shale or of clay state, of different shapes, as shown on figure 63.

But waiving the question of the similarity of the Australian and Clyde objects, a careful study of the following hypothesis will show the inherent futility of attempting to correlate the art products of any race

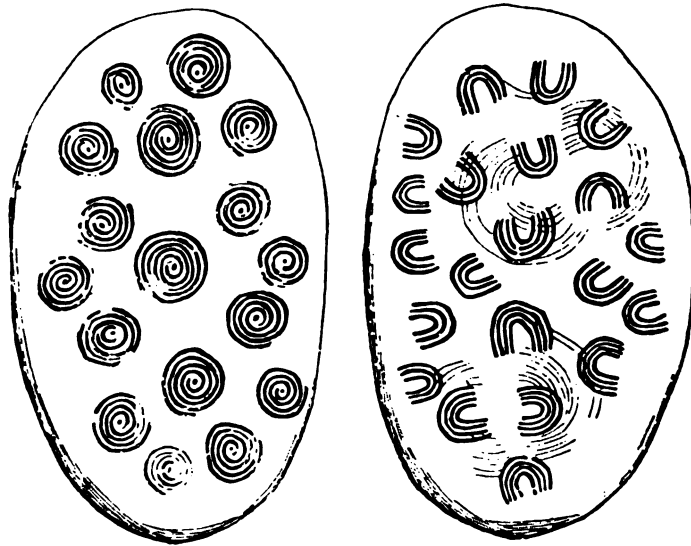


FIG. 62. CHURINGA OF SLATE FROM THE ARUNTA TRIBE,
CENTRAL AUSTRALIA ($\frac{1}{2}$)

of people in the early Iron Age, either in the Clyde or any other district in the British Isles, with those of the primitive races of Australia. The only possible way of accounting for the existence among them of common art or religious elements would be to trace them through prehistoric sources, reasoning somewhat as follows :—

- (1) At a time prior to the rise of modern civilisation the inhabitants of the Old World were savages.
- (2) From this archaic stratum of humanity some tribes

found their way to the West of Scotland, and others to Australia.

(3) Their divergence from the common stock took place before the rise of the civilisations of the Greeks, Egyptians, and Babylonians, that is, at least 5000 B.C.

(4) The immigrants to the Clyde became gradually more civilised while still retaining reminiscences of their primitive cult.

(5) At a time subsequent to 400 A.D.,¹ long after the Neolithic period came to a close, their descendants became the occupiers of a hill-fort and two small submarine stations in the estuary of the Clyde. Here they revived their ancestral worship, the ritualistic emblems of which consisted of the grotesque figures, amulets, pendants, weapons, and ornaments which lately came to light through the Clyde excavations.

(6) It follows also that during all these years the Arunta people underwent little or no change in their culture; and that at the present time it must be much the same as that which formed the primary basis of European modern civilisation.

All these propositions must be accepted as gospel before the Australian "sacred things" can be admitted to have anything to do with the solution of the Clyde mystery. One thing which tells against that theory is, that neither prior, nor subsequent, to this religious mani-

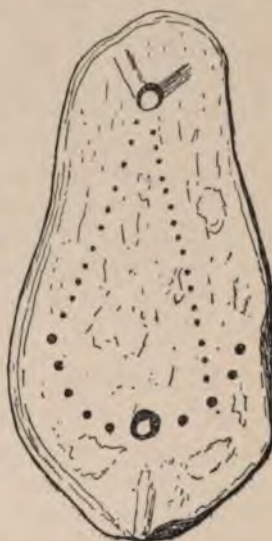
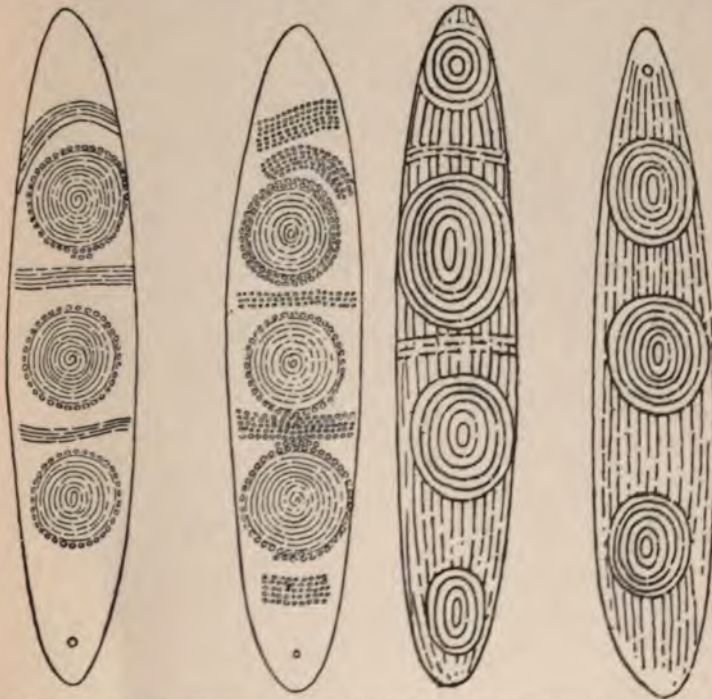


FIG. 63.
WATER-WORN CLAYSTONE
ORNAMENTED WITH PITS
AND TWO PERFORATIONS,
FROM DUNBUIE ($\frac{1}{2}$)

¹ See *Longman's Magazine* for January, 1902.

and semicircles, are the chief decorative elements made use of. On the other hand, neither the amulets—the only objects among the Clyde Art Gallery which can be compared to the Australian Churinga—nor any other object in that collection have spirals or concentric circles



FIGS. 60, 61. CHURINGA OF THE ARUNTA TRIBE, CENTRAL AUSTRALIA

as component elements of their ornamentation. In a few instances there are incomplete circles round some of the perforations and so-called cup-marks; but the main decorations consist of plain, hollow dots, or cups, and cup-and-ring marks connected by gutter channels. The Clyde amulets are neither strictly oval, nor symmetrical, nor well finished, being generally water-worn

form, the property of magicians in Sarawak, are figured in the *Journal of the Anthropological Institute*, January to June, 1903, page 80, Plate XVI. : 'The stones are immersed in water, and the water is rubbed on the patient's body as an universal remedy.' Magic stones are used in the same style in the Highlands, at least when cattle are the patients. In Australia the stone amulet itself is rubbed on the patient. None of these stones, except the Australian, are decorated with patterns.

"Lately a Lowland friend showed me a Highland magic stone, bequeathed to him by his Highland grandfather. Deep into the nineteenth century it was used for healing cattle disease. Its abode is a curious old wooden box, oddly repaired in two places with wattle, as if iron ought not to come near the sacred object. There is, however, one small iron tack in the box. The object itself is egg-shaped, of a close-grained dark stone, ground smooth. Each end of the egg has been ground nearly flat, but remains slightly convex. At the centre of each end is an incised ring, perhaps too exactly circular to be antique. But all round top and bottom, on the surface of the ends at their broadest, are faintly incised concentric rings, such as we commonly find on 'cup-and-ring' rock surfaces everywhere. The three rings on the thickest end are obliterated in part of their circumference, the stone having been much handled for an unknown time. At the thinner end, which is polished, the rings are more conspicuous. They can never have been deeply, and are not exactly traced. The object looks to me as if it had been a Neolithic adze, later truncated at either extremity. I cannot imagine how the ring-marks came on the stone except by deliberate but unskilled incision, probably not made with a point of metal. Thus the thing appears to be a Neolithic amulet, handed down for countless generations, and, till quite recently, in regular use for magico-medical purposes. If so, it may supply the missing link in my argument. At all events, it is a curious survival of very ancient practices.

"I am, etc.,

"ANDREW LANG."

"1, MARLOES ROAD, W.

"SIR,—The Highland magic stone of which I wrote lately *was* a magic stone of the Mac—s; I dare not mention their name! But before that it had been the pivot-stone of a gate. The concentric rings were caused by wear, as the upright stone turned in the stone socket. Other examples, one from Egypt, are in the British Museum. Probably the Mac—s, when they invaded the Lowlands with Prince Charles, had never seen a gate, and, picking up a smooth, egg-shaped flint marked with rings—a pivot-stone—thought it 'great medicine,' carried it home, cherished it, and used it for magical purposes. It is a case of 'Bil Stumps His Mark.' The curious may consult Mr. Drummond's 'Vacation Notes.'¹

"I am, etc.,

"A. LANG."

"SIR,—Mr. Andrew Lang recently told your readers that he had found the missing link in the chain that was to bind together the magic stones of the Aruntas and the discs, images, and 'blue points' of the Clyde crannog man. A day or two later he wrote saying his missing link with cup and rings was a gate pivot-stone; that the link was no link; and that the Mac—s on the maternal side were an ignorant lot.

"But what about Mr. Andrew Lang? Did he know a charm-stone from a pivot-stone? Did he at once recognise the difference between genuine cups and rings and the markings made on a stone pivot through the turning in a socket? By his own confession it would appear not; and so, as far as a point of this kind is concerned, we are compelled to regard him as on the same level with the benighted Mac—s who never saw a gate. Able and learned men sometimes go egregiously astray when they try to set the world right on things outside their beat. Mr. Andrew Lang's most recent contribution on Highland magic stones is a fine illustration of the old saying, 'Ne sutor ultra crepidam.'

"I am, etc.,

"SPARKBROOK."

¹ *Proc. of Soc. Scot. Ant.*, vol. x, pp. 633-5, 1872-4.

CRITICAL REMARKS ON THE POSITION AND TECHNIQUE
OF THE RELICS

In looking at the general *facies* and *technique* of this remarkable collection, now exhibited in the National Museum as relics of the people who constructed and inhabited the hill-fort of Dunbuie and the two submarine sites in the Clyde estuary, there are a few general considerations which may be submitted as more or less probable inferences from the facts disclosed by the recent investigations.

First. The disputed objects, though absolutely novel and unprecedented among the antiquities hitherto found on the Scottish area, present such a close family likeness that they must all be regarded as productions of one school of art, if not, indeed, of one artist. No one who carefully examines the technique of the objects can deny that this is true of the "idol" and "amulet" (Plate XII.) found at Langbank, and their analogues from Dumbuck; and of the spear-heads of Dumbuck and Dunbuie (see Plate XIII.). There is also a striking similarity in the method of manufacturing the shaped objects from all the three stations. The pendants, amulets, and idols appear to have been water-worn pieces of shale or slate before they were perforated, decorated, and polished. Some of the oyster shells were also water-worn before being scratched and perforated; while others showed no evidence of abrasion. That a coarse oyster shell, with a few circular holes and incised scratches, should be treasured by any human being living in Scotland in post-Roman times, either as a personal ornament, or as a medium for magical incantations, or as a religious symbol, seems to me very improbable. But in face of Professor Boyd Dawkins' statement that some of these oyster shells are American "blue points," surely my

opponents will be glad to drop the hypothesis. Further, the lines and deeply cut cup-marks and perforations have every appearance of having been made by metal tools—a fact which one would expect if they belong to the Iron Age. If this be so, the question arises as to what possible motive could anyone have in manufacturing spear-heads of soft slate or shale, and converting natural splinters of stone into the semblance of knives by inserting them into handles of horn or bone, when the inhabitants of these sites were provided with metal implements capable of cutting and boring great logs of wood. As long as it was contended that the Clyde sites belonged to the Neolithic period, there was some consistency in advocating the theory that the stone weapons and implements were really manufactured for a special purpose and utilised in the ordinary affairs of life. Mr. Lang must have seen the force of this argument when he suggested that the spear-heads were not meant to be used as weapons, but as “sacred things.” Stone spear-heads would not, however, become sacred in the Iron Age, without being associated with a tradition that they were correct types of the implements in actual use in the Stone Age, in the same way as the well-known flint embalming knives of Egypt are true survivals from archaic times when such tools were used in daily life. But nothing like these spear-heads and knives has hitherto been found in Scotland, so that they cannot be survivals from a previous state of things in our country.

Secondly. From the position and circumstances in which some of the disputed objects are reported to have been found on the Dumbuck crannog, there is good evidence to show that their appearance among the débris was not earlier than the abandonment or final demolition of the cairn. The workman who found the large spear-head showed me, in presence of Mr. Dalrymple Dun-

can, now President of the Glasgow Archæological Society, the exact spot in which it lay. This was in the mud inside one of the spaces between the steps of the ladder, which still remained *in situ*, and lying almost on a level with the log-pavement. It would appear that in the act of demolishing the cairn the ladder had been thrown down, and henceforth it became covered over with some of the stones and a few inches of mud. Now it seemed to me that this spear-head must have been put in the place where it was found *after the ladder was thrown down*, so that its age as a relic cannot be regarded as greater than that event. Mr. Lang questions this inference on the ground that the spear-head might have been there when the ladder fell. This would make little difference in my argument, because in that case it would have been absolutely on the surface and put there immediately prior to the fall of the ladder. The compartment measures twelve inches by ten inches, a space just sufficient to admit the spear-head, which is eleven inches in length. Is it not very remarkable that a workman groping with his hand in the mud should accidentally stumble on this relic—the only one found in this part of the site? Is it possible that he is an unconscious thought-reader, and was thus guided to make the discovery? And what a curious coincidence that in falling one of the open spaces of the ladder should so precisely correspond with the length of the spear-head! At any rate, if this object could have been discovered and abstracted by the accidental groping of a man's hand in mud, it could have been as readily inserted there half an hour before. The "Ugrian" god or idol (Fig. 50) is reported to have been "from the Dumbuck crannog causeway," and must also be a recent importation, as these causeways were quite superficial.

Again, some spear-heads, and the pebble ornamented

with a boat and a human hand, were found in the canoe; and hence their greatest provable antiquity would not go beyond the time when the canoe was abandoned—probably the same time that the cairn ceased to be occupied.

Thus the age of a considerable number of the more remarkable relics must be assigned to a period which ranges between the time when the Dumbuck cairn became a useless obstruction in the Clyde estuary and its recent investigation. Judging from the superficiality of the rude causeway leading to a kind of canal a little to the west of the site, and from the ring-like arrangement of the stony débris which marked the site of the “cran-nog” before excavations were begun, the removal of the cairn must have been comparatively recent. Now, according to Dr. David Murray, there is documentary evidence to show that a Corporation cairn existed in this locality as late as 1758, and it is interesting to recall what he has written on this point. In the *Glasgow Herald* of March 22nd, 1899, he writes as follows:—

“In considering the object of the structure it is to be observed that if the Corporation lower cairn of 1758 did not occupy this very spot, it stood upon the same line and close to it. There are, however, no remains of such cairn. Starting, therefore, with the fact that there was a cairn, the natural conclusion would be that the remains now discovered belong to it. To support a cairn of the size required in such a situation and to prevent sinking it is not unusual to provide a platform of wood resting on piles. . . . The object of the Corporation cairn was no doubt to mark the limit of their jurisdiction, and also to serve as a beacon to vessels coming up the river. For this purpose it would be placed near low-water mark and close to the edge of the shoal. Such a beacon may have been erected long prior to 1758, and may have been one of the works of 1556 or of 1612, when another attempt was made to form a passage through the shoal. Beacons have often a pole in the middle rising above

the stonework and surmounted by a cross. Such a pole carried down to the bottom would probably be sunk in the clay, which would produce a hole or well-like cavity similar to that in the formation of the Dumbuck structure."

If Dr. Murray is right in surmising that the present Dumbuck structure is the foundation of the Corporation cairn, and I see nothing against the supposition, then the greatest chronological range that can be assigned to some of these marvellous relics, which have so much excited the curiosity of antiquaries, is limited to the last 150 years. That they date from the time when the excavations were conducted is one way of solving the question. This is suggested by the manner in which the "idols," "amulets," etc., were found distributed throughout the débris—in the canoe, the central "well," at the bottom of the kitchen midden, on the surface of the causeway, and in the ladder compartment. It would appear as if they had been thrown away, or concealed, at all stages in the life-history of the habitation, *i.e.* during its construction, occupation, and demolition. On the supposition that they had been used in the ritual of religion, or of magic, can any plausible reason be given why they should be so sporadically distributed?

We have no knowledge of the precise position in which the "queer things" of Dunbuie were found, with the exception of the limpet shell showing the carved human face which, according to a recent statement in the *Journal of the British Archæological Association*, September, 1901, "was excavated from a crevice in the living rock, over which tons of débris had rested. When taken out, the incrustations of dirt prevented any carving from being seen; it was only after being dried and cleaned that the 'face' appeared, as well as the suspension holes on each side."

So, this unique piece of art was in the fort before it became a ruin and otherwise presented evidence of great

antiquity ; but yet it is stated in Mr. Millar's report that there was "nothing at all of an archaic character in this example of shell-carving."¹ Moreover, the date when the fort ceased to be occupied can hardly be as late as 1758, the probable date of the demolition of the Dumbuck cairn, the only time the great spear-head, if genuine, could have been brought into the débris. Here, therefore, is a chronological discrepancy to be accounted for, if it be true that the "queer things" from all the Clyde stations emanated from one "school." The only period, so far as I can see, since these habitations came into existence, which afforded a probable opportunity for placing contemporaneous objects on all the three sites would be when the recent excavations were in progress.

Thirdly. We now come to a most interesting question, viz. What were the designs or motives the Clyde artists had before them when manufacturing and ornamenting their grotesque productions? For no one can suppose that the initiative for such a variety of forms and combinations of primitive art elements originated in pure imagination. One thing certain is that they are the works of human hands, and the real question at issue is whether these hands belonged to ancient or modern artists. Mr. Lang could not entertain the possibility of their being forgeries on the ground of their similarity to certain "sacred things" of the Arunta tribe in Australia. "That a forger," he writes, "presumably ignorant of the recently ascertained Australian facts, was unlikely to counterfeit objects of which he could scarcely have heard. He would have forged *familiar*, not *unknown objects*." Now, strange as it may appear, it is the *familiar*, and not the *unknown*, that the Clyde artists have imitated ; for on looking at these Australian "sacred things" I can see no resemblance whatever between any of them and the Clyde

¹ See page 133.

disputed objects. Where, then, are the familiar designs which served as models to the Clyde artists to be found? They are not far to seek, for one has only to scamper over the neighbouring hills to find a profusion of primitive rock-sculpturing showing designs analogous to those on the disputed objects—plain cups, cup-and-rings, with or without gutter-channels, spirals, circles, concentric circles, semicircles, horseshoe and harp-shaped figures, etc. The most striking novelty in the ornamental designs to be seen on the Clyde objects is the cup-and-ring with diverging lines forming sun-like figures—such as are to be seen on the great spear-head from Dumbuck (Plate XIII., No. 12). Indeed, there is not a single design on any of the Clyde disputed objects (exclusive of the grotesque figures) which cannot be matched, or easily suggested, by the primitive rock-sculpturing at Auchenorlie, situated only a short distance from Dunbuie and Dumbuck. When the Clyde cairns and the Dunbuie fort were in occupation these rock-carvings were there, and they could have been copied at that time as well as now; but had this been done on small objects of slate and shale they would have been, even then, as much out of place as surviving remnants of the earlier Scottish civilisation as they are at the present day. In short, if the manufacturer of any of these “queer things” were one of the inhabitants of Dumbuck, he might have been characterised as a “wag” or “forger,” just on the same grounds as he is to-day.

Fourthly. All the disputed objects are of such a simple character that they could be whittled in a few afternoons by anyone possessed of some practical artistic skill, and acquainted with the rock-carvings of the neighbourhood. But, in applying these local designs to small objects, such as unworked splinters of sandstone and pieces of water-worn shale and slate, their manufacturers had

evidently not sufficient archæological knowledge to realise the significance of the fact that they were doing what prehistoric man, in this country, is never known to have done before. To imitate in miniature cup-and-ring markings, gutter channels *et omne hoc genus*, by punctured dots and incised scratchings involves, in my opinion, a misinterpretation of the primary meaning attached to cup-marks and other rock-sculpturing of prehistoric times.

At the commencement of the Clyde controversy, when the Neolithic theory of Dumbuck "held the field," Mr. Lang appended the following postscript to one of his letters, which, perhaps, I may be allowed to resuscitate, along with my reply:—

"A forger anxious to forge a Neolithic site would, of course, drop in a few Neolithic arrow-heads, 'celts,' and so forth. The fool of a forger at Dunbuie and Dumbuck neglected this elementary precaution!"

To this I replied as follows:—

"It is not an uncommon thing to find the gist of a letter in the postscript; but Mr. Lang has reserved for his a gem of the rarest quality. The joke of the matter is that 'the fool of a forger' has proved his foolishness by neglecting to supply a single particle of the Neolithic material which alone could support the conclusions advocated by Mr. Lang and his friends; and, since Dame Nature has not supplied this all-important defect, the claims of Dumbuck and Dunbuie to be regarded as Neolithic sites collapse."

In the above words lie one of the greatest safeguards to the science of archæology, for nothing could be easier than to detect modern imitations of Neolithic relics. But the objects under consideration are not of this kind, as they do not imitate any prehistoric antiquities found in this country, and hence I demurred to the appropriateness of the word *forgery*. To whittle on a piece of shale

fantastic designs composed of incised lines, dots, and circles, and then to throw it into an old dirt heap, even supposing it were intended to allure another silly person to pick it up as a curiosity, is not forgery in the ordinary sense of the word, *i.e.* it would not be judged as a criminal act, as it is not infringing the patent rights of any person, nor defrauding anybody, nor imitating any known object of antiquity. Were, however, such objects sold as genuine antiquities the question of fraud and forgery might arise; but the Clyde case is not complicated by any sordid motives of this kind. I do not, for a moment, doubt that the various finders of these objects picked them up here and there in the débris during the progress of the excavations; but the question is, When were they put there? That the disputed objects are amusing playthings—the sportive productions of idle wags who inhabited the various sites—seems to be the most recent opinion which finds acceptance among local antiquaries. But this view involves the contemporaneity of occupancy of the respective sites, of which there is no evidence; or a still more improbable hypothesis that they are the productions of artists of different periods who indulged in this kind of waggery.

Finally. The absence of any trace of motive, lucrative or otherwise, so far as I know, in connection with the Clyde discoveries has, undoubtedly, added to the difficulty of solving this mystery except by an appeal to comparative archæology. But however strong presumptive evidence may be, there will always be some, no doubt on conscientious grounds, who refuse to be influenced by its indications. Hence the frequency with which archæological disputes resolve themselves into matters of opinion. In deadlock eventualities of this kind the invariable consequences are, that the disputed objects, some of which may be really valuable, have to be placed to a suspense

account to await further developments. Such was the result of the Breonio controversy, and such has hitherto been the fate of the Clyde "grotesques," notwithstanding all our efforts to marshal the facts and arguments in the most telling manner. Readers should also remember that these Clyde finds came before us piecemeal fashion, and had to be dealt with from time to time in a fragmentary manner. No record appears to have been kept of the precise conditions under which the most remarkable objects were discovered. The osseous remains found on the Dumbuck "crannog," though of primary importance in determining the age and duration of its occupancy, were practically ignored, as many months elapsed before a moiety of the bones were submitted to expert examination, and then the most valuable of them, viz. the supposed horns of the fallow-deer, had disappeared altogether. Even the structural details of the various stations had to be culled from paragraphs in the local press and scrappy communications to a few archæological societies. The official report on the excavations at Langbank, though read at the Glasgow Archæological Society about two years ago, has not yet been published. To obviate these and other difficulties, as far as possible, I have at the outset placed before readers the main results gathered from the most reliable sources, as well as from my own observations, without, however, touching on the *fama clamosa* attached to some of the relics. Having done this, the *questio vexata* is duly formulated and discussed on archæological grounds alone. The method of procedure was first to prove that the structures and ordinary archæological remains discovered on all the sites belonged to the early Iron Age, and not to the Neolithic Age as the investigators and others maintained. Having successfully accomplished this task, two other questions, arising out of the final settlement of the first, had to be faced, viz.

(1) What is, or can be, the meaning of these strange-looking objects which, for convenience of reference, are catalogued as “weapons,” “implements,” “ornaments,” “amulets,” and “idols”? and (2) How came they to be located on sites which were constructed and inhabited after the Roman occupation in Scotland came to an end, a time when tools and weapons of iron were in common use in Scotland? These questions were disposed of by showing that no rational answer to either has yet been propounded or offered. Hence these disputed objects, in face of the clearly defined chronological horizon of the structures and the few normal relics found on them, become virtually stranded as meaningless interlopers—a solitary group of artificial objects, of a *sui generis* character, but without a single link to connect them with any of the series of antiquities hitherto found within the Scottish area. Archæology carries us no further, and beyond this our brief does not extend. Our task was to bring archæology into court as a witness. The final verdict on their origin and purpose belongs to a different tribunal.

Let us now see how the main question stands. I think we are entitled, as the result of the previous discussions and arguments, to disencumber our minds of the idea that the disputed objects belong to, or are survivals from, the Neolithic Age; or that Neolithic civilisation has anything to do with the solution of the Clyde mystery. On the same grounds we claim to have established that the structures of Dunbuie, Dumbuck, and Langbank are the remains of inhabited sites of the early Iron Age, dating to some time between the fifth and twelfth centuries; that their constructors were in possession of excellent metal tools, and, consequently that they had no occasion to manufacture knives or spear-heads of stone; that the presence of these disputed objects among relics, whose types are well known in the Scottish archæological

area, is absolutely inexplicable by any light hitherto derived from the annals of Scottish history or archæology ; and lastly, that our critical review of the conditions under which they have come on the field of archæology has elicited so many startling discrepancies in archæological matters already well founded in fact, that we are justified, on circumstantial evidence alone, in rejecting their claim to be regarded as relics of any phase of Scottish civilisation.

CHAPTER VIII

GENERAL AND CONCLUDING REMARKS

WE now come to the calm region of reflection, where our chief duty is the consideration of the practical lessons to be derived from the above narrative of a remarkable series of archæological controversies founded partly on wilful imposture, and partly on false data or ignorance. The story will, indeed, be shorn of half its value and object if it does not form an immediate stimulus to the adoption of more precise and logical methods in the conduct of archæological researches than the vicarious treatment which has hitherto been accorded to this fascinating pursuit. On this phase of the subject we have to look for encouragement chiefly to the higher and nobler sentiments, which are engendered by the steady growth of scientific culture and its influence, in developing a desire for accurate information in all departments of knowledge. Among the more pressing philosophical problems of the day the marvellous career of the human race on the globe, as disclosed in the rise and progress of social, religious, and scientific institutions, holds the foremost place. Any suggestions which have a tendency to improve our methods of groping over this vast field of inquiry are second only to actual discoveries.

For the purpose of strengthening the general observations here submitted, as a plea for the need of improving our methods of conducting anthropological researches, a slight deviation from the general scope of this book is

made by introducing a few instructive incidents of false records, though by no means associated with any suspicion of *mala fides*. It matters little what the primary cause of an error may be, whether emanating from ignorance, defective observations, or wilful misrepresentation; for, when once it becomes incorporated with authoritative records, it entails the same vitiated consequences to future observers, often leading to personal wrangles and bad feeling. Everyone who has had anything to do with practical investigations knows how difficult it is to elicit from workmen the precise position of a relic in the débris, and its relationship to other objects. Possibly the workman took no special notice of the spot where the object lay, and the explorer, by the very persistence of his queries, may be the means of leading an unskilled person to give a garbled account about a matter which seemed to his untutored mind a meaningless triviality.

The nature of the subject-matter discussed in this volume has led us to wander far afield both in space and time. The controversial problems reviewed, in which some of the most distinguished archæologists and anthropologists of our time were concerned, are numerous and varied, and cannot therefore fail to be instructive to a younger generation; but yet comparatively few of the disputed matters were finally settled at the time of their occurrence. It would appear as if the mental processes requisite for forming a correct judgment on controverted materials are sometimes so influenced by preconceived ideas that judgment is unconsciously biassed. Nor is this feature exclusively confined to the tyro in scientific researches. The famous geologist, Sir Roderick Murchison, is reported to have been so obdurate in accepting the evidence of the erosive power of glaciers in the formation of rock-basins that it was only a few years before his

death he gave a tardy acquiescence to this doctrine. In a letter to Sir William Denison (1864) he writes: "In my anniversary address to the Geological Society you would see the pains I have taken to moderate the icemen, who would excavate all the rock-basins by glaciers eating their way into solid rocks."¹ Yet the glacial theory of the formation of rock-basins has for a long time been an accepted creed among most geologists. Evidence which may be clear and convincing to one mind may not have the same effect on another—a fact which should at least warn us to be tolerant in controversies which are founded on matters of opinion.

While collecting materials for my *Lake-dwellings of Europe*, I occasionally came across instances of important deductions which, for longer or shorter periods, were accepted as founded on undisputed evidence, but which afterwards turned out to be false. Erroneous data of this kind have been pointed out in Sir Charles Lyell's *Antiquity of Man*, which, occurring in the hands of such an authority, are worthy of being recorded as an instructive object-lesson of the effects of false data.

In 1883, in the course of railway excavations in the valley of the Meuse, some wooden structures, described by Mr. Ubaghs² as a kind of crannog, were met with in the superficial alluvial deposits of clay. Among a number of relics of the Neolithic period was a portion of a human skull, to which more than ordinary interest was attached, as it was near the same spot where Professor Crahay found the celebrated human jaw known as the *Smeermaas mâchoire*. This relic was described by Sir Charles Lyell as coeval with a mammoth tusk found near the same place. The subsequent facts which came into

¹ Geikie's *Memoirs of Sir R. Murchison*, vol. ii. p. 318.

² *L'âge et l'homme préhistoriques et ses ustensiles de la station lacustre près de Maastricht*. 1884.

collislon with Lyell's statement are thus epitomised in *Lake-dwellings of Europe* :—

“The present skull was found eleven to thirteen feet below the surface, lying upon the gravel bed on which the wooden structures reposed. From a careful comparison of it with the ‘Crahay jaw,’ now in the cabinet of anatomy in the University of Leyden, Mr. Ubaghs found that the two relics were identical as to patina, consistency of bone, and the composition of the material in which they were embedded (traces of which still adhered to them), and he comes to the prosaic conclusion that the two belonged to the Maestricht crannog : ‘Cette mâchoire, ainsi que les autres ossements de la même provenance, ont appartenu à notre station lacustre près de Maestricht.’

“M. Kerkhoffs¹ attacks Sir Charles Lyell for some palpable mistakes he has made regarding the relative positions of the Crahay jaw and the mammoth tusk. According to Sir Charles, the tusk was found ‘six yards removed from the human jaw, in horizontal distance.’² M. Kerkhoffs gives the following quotation from Crahay's original notice of the discovery : ‘Dans une pointe que forme le plateau de Kaberg, en s'avancant dans la plaine, près de Smeermaas, on a rencontré dans la terre argileuse à 6m50 au-dessous du sol, la mâchoire inférieure d'un homme garnie de ses dents, sans être accompagnée d'aucun autre reste ; elle ne semblait pas avoir roulé ; les ouvriers assurent que la terre n'y avait pas été remuée. L'os est très fragile, mais n'a pas été dans cet état de mollesse des ossements d'éléphant ; aussi n'est-ce pas la même couche de terre ; car au-dessous de cette mâchoire s'étendait une couche irrégulière de gravier et de cailloux de 2 à 3 mètres d'épaisseur, au-dessous de laquelle était placée une nouvelle couche argileuse dans laquelle on a trouvé des restes d'éléphants à 14 mètres au-dessous du sol.’

“From these remarks it would appear that Sir Charles Lyell's account of the position of the *mâchoire* is neither a fact nor in accordance with Professor Crahay's description of the conditions in which it was found, as the tusk is here described as having been over twenty-four feet deeper.

¹ *Bul. Soc. Anth.*, 1874 and 1884.

² *Antiquity of Man*, 4th ed. p. 421.

Could science or romance furnish a more instructive incident to prove the absolute necessity of correctly recording the facts and relics brought to light by excavations? The archæological value of a discovery may be entirely annulled by the neglect of this essential duty. I have in my mind's eye a curious incident of this kind. A man living in the suburbs of a fairly large town in Scotland found, while digging a drain in his garden, an adze of jade and a prehistoric clay urn. At first it had been reported that the adze was inside the urn, but further inquiry showed that this was not the case, the objects being a few yards apart. The opinion of an expert, that the adze was a modern Australian implement, an opinion with which I entirely concurred, was contemptuously rejected, and the true history of how this curious association of prehistoric and modern relics came about has never yet been explained so far as I know.

* * * * *

In addition to the causes of error arising from the workings of the ordinary machinery of the brain, and those which have their origin in pure carelessness, there are many other fallacious sources which dog the footsteps of the antiquary, but over which he has still less control. The special one which we had to deal with in these pages centred on the *suggestio falsi*—a subject which, under any circumstances, requires the most delicate handling. The effects of this pernicious element came before us in a variety of ways. We had instances in which objects, with regard to which there could be no manner of doubt that they had been recently manufactured, were knowingly sold as genuine relics of antiquity. As examples of this kind may be mentioned the works of "Flint Jack," the numerous fabrications of lacustrine antiquities in Switzerland, the spurious imitations of flint implements found

in the Quaternary gravels of England and France, etc. A more insinuating, but equally unprincipled mode of proceeding, was to represent moderately old, but so far genuine objects, as having been found in circumstances which could not be accepted as authentic, without a negation of some of the leading deductions of archæological science. The persistent controversies in regard to the Moulin-Quignon jaw and the Calaveras skull entirely turned on some variation of this *ignis fatuus*. Of course there are many things, such as the osseous remains of animals, which could not by any possible means be imitated by the most ingenious forger. I am not aware that there was any suggestion made that the mortars, pestles, and other stone objects found in the Californian gravels had been actually manufactured for the purpose of deception. The fact that precisely similar objects could be readily found on old Indian camping-grounds, or, indeed, from the modern inhabitants of the district, does not, however, appear to have been taken into account by the earlier writers on the subject. For we must remember that archæological science was then only in its infancy, and that those who furnished the most important part of the evidence were unskilled observers. The vast significance of finding a well-made mortar, with its pestle, embedded in Tertiary gravels, probably never entered the minds of the finders. Certainly they could have no idea that the story, if corroborated and accepted on unimpeachable evidence, necessarily implied a greater antiquity of man than any other recorded discovery. Yet the *crux* of the whole matter originally lay in a simple matter of observation, merely to determine the precise circumstances in which the objects were found, and how they came to be placed there—questions which could only be determined then and there by skilled observers. Once a suspicion of

mala fides arises a controversy generally ensues, embittered, it may be, by inconsiderate remarks on both sides, and the whole question has often to be discussed and adjudicated on hearsay evidence; and as there may be no longer any possibility of ascertaining and verifying the facts of the original discovery, there remains really no alternative but to appeal to the principles and methods of inductive archæology. The Moulin-Quignon jaw and the Calaveras skull were, in all probability, put in the positions in which they were discovered by thoughtless persons, either as a practical joke, or in consideration of some trifling reward.¹ But who, or what court of justice, could, at any subsequent time, decide the question at issue in either case on the evidence adduced? But time is often a solver of riddles. Now, after an interval of some forty years, we have an opportunity of contemplating, as it were, in cold blood, the far-reaching consequences of these acts of thoughtless indiscretion.

When doubts as to the authenticity, or genuineness, of things antiquarian are raised, probably the first idea which springs up in the mind of the investigator is that of *motive*, a subject which, of course, in criminal trials becomes a leading feature. In some instances a slight preliminary inquiry establishes a *primâ facie* probability of imposition, the patent motive being monetary gain—a fact which at once strengthens the evidential value of the suspicious-looking marks on the pretended relic which first attracted attention.

Forgeries of this kind, as already mentioned, are quite common among the workers in the flint-implement-bearing gravels of England, France, and other countries. The most bewildering cases, however, are those in which

¹ It will be remembered that M. Boucher de Perthes offered a reward of 200 francs to the gravel-workers at Abbeville for the first discovery of human bones *in situ*.

no intelligible motive can be discovered, unless we characterise the mere desire to hoax some ardent fellow-antiquary as a valid motive. The late Chancellor Ferguson, of Carlisle, submitted a report to the Society of Antiquaries on February 15th, 1900, of which the following is the preamble:—

“As local secretary, the painful duty devolves upon me of nailing to the counter, as forgeries, two Runic inscriptions on rocks in Cumberland, of which accounts and illustrations are given by our late Fellow, Professor George Stephens, in his great work on *The Old Northern Runic Monuments of Scandinavia and England*.”

The first is an inscription on Barnspike Crag, in the parish of Bewcastle, in Cumberland, which Professor Stephens translates as follows:—

“*Baran wrote (this inscription) in memory of Gillhes Bueth who was slain in a truce by Robert D. Vaulks for his patrimony now called Llanerkasta, a clumsy allusion to the long-exploded story that Robert de Vallibus, second Baron of Gilsland, slew Gilles Bueth on the occasion of a truce.*”

From Mr. Ferguson's learned communication describing the discovery, history, and evidence of these forgeries, the following passage will be read with astonishment:—

“The reference in the first of these inscriptions [the one given above] to the exploded story of the murder of Gilles Bueth by Robert de Vallibus, and the aptness with which, in each case, a personal name fits into the modern name of the place, excited long ago suspicion in my mind. I was aware, too, that the local antiquaries of North Cumberland, in the late fifties and the early sixties, were hot in controversy with one another in the columns of the *Athenæum*, in the columns of the Carlisle papers, and in shabby-looking pamphlets; that the language in which they wrote of or to one another was strong; that they were not above ‘salting’ Roman sites with various objects for their brother local archæologists to discover and be befooled over. But these men are all gone dead long ago. Despite of

all these things I have related they did good work, and they had one great virtue, they were hospitable to the extreme, and never failed, quarrel as they might on paper, to show hospitality to one another, or to any stranger antiquary, who might be wandering along the Roman wall."

Comment on the above is unnecessary.

With regard to specific rules in the art of detecting modern forgeries, which unfortunately come too frequently under the cognisance of professed archæologists, I have really little to say, having no pretension whatever to the distinction of being considered an expert in the manipulative processes of either ancient or modern workers. Skill in recognising the special features of workmanship in different ages and localities is, however, attainable; and it is most frequently to be met with among the qualifications of curators of museums and collectors of antiquities who have opportunities of passing under review all kinds of antiquarian objects. In this way they become familiar with the prevailing types of ancient relics, and their distribution in different areas, so that the slightest deviation from their typical standard is at once detected. One with eyes so trained and long experience is a veritable Sherlock Holmes, whose capability in spotting every abnormal feature is truly astonishing. When the question of forgery is first mooted the cause of suspicion may be the merest trifle, which to ordinary eyes would probably suggest nothing. Sir John Evans tells us that when at Abbeville he once saw a flint implement, of a rich brown colour, dug out of the gravel, which "proved, however, still to retain upon its surface the finger-marks of the forger, who had smeared it with the dark brown coating of clay. Mr. Francis Galton might perhaps have identified the artist by the finger-marks. On thoroughly washing such specimens their modern character becomes apparent." It has been already noti-

fied (page 46) that the Swiss antiquaries on one occasion detected a forged bronze arrow-head by the fact that it retained the impression of the fibres of the wooden mould from which it had been cast.

But such instances are merely illustrations of the potency of common shrewdness and a quick perception of minute details, qualities by no means to be despised in archæological researches. The acquired skill of an expert is, however, something more—something which has to be acquired by long apprenticeship. This qualification, though slow in growth, is quick in action, often leading the expert to act as if by intuition after a short inspection of the object. It was, apparently, on technical knowledge of this kind that Mr. Charles Hercules Read, Mr. J. Romilly Allen, and Professor Boyd Dawkins founded their opinions as already described (page 178). If skilled knowledge is to be of any service to archæology, surely that of these distinguished experts in the science must be regarded as a weighty element against the authenticity of the disputed objects of the Clyde district. The presence of two fresh-looking oyster shells, known as American "blue points," among the Clyde art gallery is rather a hard nut for the supporters of the Neolithic theory to crack. It will be interesting to know how this fact is to be explained away by the believers in these ancient shell-carvers of the Clyde valley.

"How Bogus Antiquities are Made" is the heading of an amusing article which appeared in *Truth* (May 28th, 1903) under "Notes from Paris." It extends to upwards of four columns—impossible to condense and too long to be quoted. As a specimen of the information here divulged the following extract must suffice:—

"I have been to see a manufacturer of such wares. He makes no secret of his business, and enjoys sometimes a laugh at the amateurs who come in his way. In chatting about them

he said: 'Latterly an antiquary sent me a block of marble to make a copy of an *objet d'art* belonging to him. I executed the order, and gave it such a *patine* that it looked more genuine than the original. I sent it to him, and he took it for the original. Some days later I took him the real thing. He looked at it, turned it round, passed his finger over it, made a face, and said: 'It's a bit faulty. To be frank, it's a blotched copy. I hardly care to take it.' I looked at him, and at last I said: 'Why, it's the piece you gave me to copy.' I thought he would have laughed with me. But, no; he grew quite angry, talked aloud, and pretended that he had known without my telling him, but feigned ignorance to see how far my impudence would go.'

"I turned the conversation from marble to wooden antiquities.

"'With wood you can do what you please. You can now make it worm-eaten and put dry rot into the carved parts. A chisel cannot work on dry rot. This defect can be used as a certificate of authenticity. One of my friends bought a *buhut*. He paid three experts to examine it, and they certified it to be genuine. Some time after he had it taken down to shift it to another room. In moving it, a panel got broken, and he sent it to Picard to be repaired. 'Goodness me!' cried Picard, 'it is the *buhut* that I made a few years ago.' The cabinet-makers who work for antiquaries now use the oak which had been employed in the beams and rafters of old houses. Fortunes have been made by knowing people who bought old tumble-down houses in Orleans and other provincial towns. They sold the rotten wood to manufacturers of ancient furniture for more than the house cost, and had the ground for nothing. I have another acquaintance who manufactures timepieces for an antiquary at the price of 70,000 fr. apiece.

"'And for what does the dealer sell them? He alone could say. Such things are counted invaluable. The antiquaries sell them to courtiers, who sell them to Park-lane millionaires and Americans. There are now only these two classes of purchasers. Here and there a French millionaire springs up and wants to distinguish himself as a collector. One should leave to all such their illusions. The forged thing is as good

as the genuine. Not long ago I took two pieces of furniture that M. de Vaufrélard prides himself on possessing for genuine things, until I became acquainted with the man who made them. Marble is the material that least betrays the present-day workman. I am now making a marble fountain which will look the product of a far-back time. I gave it *patine* by burning damp straw under it; and then I knock off a nose, or a finger or leaves of a wreath. It is a great trial to artistic workmen to be obliged to mutilate their work in this way. We feel awfully disgusted when we have disfigured a statuette. But we can make three times more money in working for antiquaries than for moderns. Sometimes our profits are enormous; we have to be so conscientious, and so attentive to details. The antiquaries can ask any prices they like. Their customers want antique things to give the illusion of having ancestors who flourished in far-back centuries. A present craze is for tenth, eleventh, twelfth, and thirteenth century marbles. They are very ugly, but they help to throw dust in the eyes of South African gold kings settled in Paris, and American heiresses."

The probable origin of the above article in *Truth* was the sensational report that the supposed masterpiece of Greek art known as the tiara of Saitapharnès, in the Louvre Museum, Paris, was a forgery. It would be too long to describe the full history of this object and the discussions to which it gave rise among European experts in classical archæology; but those specially interested in the matter will find all that in *L'Anthropologie*,¹ from the pen of no less an authority than Salomon Reinach. It may, however, be of interest to give a few of the leading features of this remarkable case.

At a séance of the *Académie des Inscriptions et Belles-Lettres*, held on the 1st of April, 1896,² it was announced that the Musée du Louvre had just acquired two wonderful monuments of ancient Greek goldsmiths' work, viz. a tiara and a neck-collar, found in Southern Russia, near

¹ 1903, pp. 238, 361 *et seq.*

² *Comptes Rendus*, p. 133.

the site of the ancient town of Olbia. For these objects 200,000 francs were paid. On the tiara (Pl. XVIII.) there was an inscription to the effect that it was an offering by that town to a Scythian king named Saïtapharnès. One did not know, it was said, which to admire most—the fresh condition in which the tiara had reached them, the importance of its composition, or the historical interest attached to it. From the very beginning, some experts, such as Furtwængler, of Munich, De Stern, conservator of the Odessa Museum, and Murray and Read, of the British Museum, had expressed doubts as to the authenticity of the tiara, as well as of other antiquities professing to come from the same quarter. But these opinions were confined to experts and had no effect on the public, or on the responsible authorities of the Louvre Museum. It was not till the summer of 1903 that the circumstantial evidence of its forgery reached a climax. M. Reinach thus describes the circumstances :—

“ La crise décisive fut le resultat d'une ‘fumisteire.’ Un artiste montmartrois, M. Mayence dit Elina, sous le coup de poursuites pour avoir falsifié des dessins de Pille, déclara au juge d'instruction Boucart qu'il était l'auteur de la *Couronne de Semiramis* (17th March, 1903). Puis il rectifia ; il s'agissait de la tiare de Saïtapharnès. Immédiatement, le public assiégea la vitrine du Louvre et la polémique commença. Consulté par des journalistes, je déclarai qu'Elina avait un rival Razoumowsky (*sic*), qui avait été désigné, dès 1896, comme l'auteur de la tiare, mais que les efforts faits pour le retrouver, étaient restés sans résultats. Là dessus, un orfèvre russe d'Odessa, établi à Paris depuis 1897, et une dame d'origine danoise, écrivirent au *Matin* (23 Mars) que ‘Rouchoumowsky,’ leur était bien connu, que c'était un ciseleur de grand talent et qu'il était bien l'auteur de la tiare.”¹

Meantime a correspondent of the *Figaro* telegraphed

¹ *L'Anthropologie*, t. xiv. p. 247.



THE TIARA OF SAÏTAPHARNÈS RECENTLY PROVED TO BE A FORGERY
FROM ILLUSTRATION IN *ACADÉMIE DES INSCRIPTIONS ET BELLES-LETTRES* 1895



1

from Odessa that Rouchoumowsky was ready to come to Paris for 1200 francs, and supply proof positive that he had actually manufactured the tiara. The result of the official investigation which ensued on his arrival in Paris has not, however, completely solved the mystery. There is no longer any doubt that the tiara to the extent of three-fourths was the actual work of this artist ; but as to the rest, as well as certain ornamental details, they were supplied to him as mutilated fragments, said to be ancient, by one Hochmann, a grain merchant, from Otchakoff, near Odessa, for whom he had executed the work. It is reported that behind all there is a learned archæologist who manufactured the supposed ancient fragments, but who will not come on the scene till 1905, when the time for taking legal action in cases of forgery expires.

* * * * *

Civilisation may be defined as the *tout ensemble* of human activities, as disclosed in the current phenomena of social and national life. When these activities are carefully scanned as to their origin and *modus operandi*, they speedily resolve themselves into the principles of the division of labour which, in the present day, regulate nearly all physical and mental work. As the population increased in number and prosperity these intellectual and commercial highways, which stretch from the mythic past along a series of well-defined channels, became more and more crowded by highly trained candidates competing for distinction and preferment in their respective spheres of action. Thus we find society divided into various groups—statesmen, lawyers, historians, philosophers, doctors, clergymen, professors, soldiers, smiths, carpenters, etc., all of whom had to undergo a preparatory course of training or apprenticeship before being allowed to discharge their special duties. Moreover, many of the pro-

fessions and trades are further protected by long-standing monopolies, customs, and fashions, whose faint beginnings are lost in the mists of antiquity. The duties of these representatives of the body-politic, whether dependent on mental ability or mechanical skill, are not transferable to the uninitiated. On an emergency the smith cannot take the place of the carpenter, nor the doctor that of the lawyer; and so it is with all skilled experts. Unfortunately this safeguard to efficiency has not hitherto been enforced in those departments of knowledge, such as archæology, the interests of which are not directly essential to the commercial prosperity of the nation. But the materials of archæology are so saturated with human interest that they appeal to the sentiments of all cultured people, and hence the vast majority of antiquaries, being recruited from all professions, trades, and grades in life, may possess none of the qualifications requisite for the successful prosecution of original work. For this reason the best efforts of tyro antiquaries often lack the methodical arrangement and precision which characterise the productions of those occupying themselves with more utilitarian studies. It follows from these remarks that if archæology is to be conducted under the most favourable conditions its methods of reasoning and principles of action must be acquired through systematic training, the same as is done in all other crafts and sciences.

But if on purely academic grounds a *primâ facie* plea can be established for systematic instruction in archæology, what a strong case could be made out of the story unfolded in these pages, not only for securing intelligent supervision for all field work, but also for a reconsideration of the relationship of the State to the antiquities still preserved in concealment under the surface of the earth! Such discoverable materials are a valuable national asset, and the State, through its accredited agents, ought to

prevent their wanton destruction. For the future it is on spade-work we have chiefly to rely for any considerable increase to the antiquarian materials already preserved in our museums. But the spade can be used as an implement of destruction as well as for unearthing archæological treasures. Success depends on the intelligence which guides the hand of the operator. Excavations conducted by incompetent and irresponsible persons may do irretrievable mischief by destroying evidence which in the hands of a skilled antiquary might prove to be a valuable discovery. Prehistoric sites, forts, habitations, sepulchres, etc., may be roughly excavated without yielding any relics, simply because the operators were ignorant of the kind of remains they were to look out for. This kind of research is little better than what a farmer does when he removes the stones of a cairn, or a fort, or a circle to build dykes. By such haphazard means a few antiquities have occasionally come to light, but far more have been lost. All indiscriminate excavations on antiquarian sites by unskilled persons, however interested they may be in such work, should be forbidden by law. Some years ago I visited the famous Hill of Tara along with an excursion party consisting of members of the Royal Society of Antiquaries of Ireland, and there saw open trenches and sporadic diggings through its raths and green mounds, done by an irresponsible enthusiast for the fanciful object of discovering the "Ark of the Covenant."

On a somewhat similar footing must be placed the law relating to treasure-trove as it is now put in operation in this country. The recent action of the Government against the Trustees of the British Museum, for the recovery of certain gold ornaments found in Ireland as treasure-trove, proves how necessary it is that the entire question of the relation of the State to Archæology should

be reconsidered and readjusted on a basis of common sense. In commenting on this unique case, the editor of the *Juridical Review* makes the following judicious remarks :—

“ It is absurd that the nation through the Crown—for that is what it comes to—should be able to lay claim to a gold torc if found hidden in the ground, but not if found on the surface of the ground or in the sea, and probably not if found in a prehistoric grave (for that is presumably not a case of *occultatio thesauri*, but rather of deliberate abandonment). If the claim of the finder of articles of antiquarian value, or of the owner of the land in which they are discovered, is to be overridden in the larger interests of the public, the law should be reformed so as to avowedly meet this object, and should in particular be extended so as to include, with adequate safeguards and inducements, all objects of distinct antiquarian value, whether of gold or silver or not, and irrespective of any requirement of proof or presumption as to their having been originally hidden.”¹

To rectify these legal anomalies and, especially, to protect the antiquarian remains still extant in our land, surely something ought to be done. Would it not be advisable, as is done in other countries, to appoint Government inspectors in different districts whose duty should be to see that antiquarian excavations were conducted by properly qualified persons, or under the auspices of recognised authorities? The Cantonal authorities in Switzerland soon put a stop to the indiscriminate howkings for lacustrine antiquities that went on after the *Correction des eaux du Jura*, which lowered the surfaces of some of the lakes six or seven feet.

In conclusion it may be observed that, in this country, it is private liberality which generally supplies the funds for carrying out archæological researches.

Foremost among the investigations, which come under

¹ *Juridical Review*, vol. xv. p. 277.

this category are the excavations and publications of the late General Pitt-Rivers. His exhaustive monographs are of the utmost value to students of British archæology, as well as perfect models of how antiquarian discoveries should be recorded and illustrated. But the systematic teaching of anthropology has now become too important a branch of human knowledge to be left dependent on so precarious a source of support as private liberality. The least that should be done, to put the students of the history of Man and Civilisation in this country on something like a footing of equality with those of other civilised nations, would be to appoint a Professor of Anthropology and Prehistoric Archæology in each of the three capitals of the United Kingdom, with suitable class-rooms within the walls of their respective archæological museums, so that their vast treasures could be readily available to illustrate systematic lectures on this fascinating subject. In this way the value of our antiquarian museums, as a means of popular instruction, would be greatly enhanced; for, in the present lifeless condition of these institutions, few can be regarded as returning to the community an adequate *quid pro quo* for the large sums yearly expended on their upkeep.

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